Gleanings in Bee Culture

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CONTENTS

June, 1952

Price of Honey 325
Honey Price Support for 1952 ..... 329 - 330
Black Diamond and Yellow Gold — John Walsh, Jr. ..... 331 - 335
Honey Recipe Box 335
Beekeeping in Alberta, Canada — W. G. leMaistre ..... 336 - 340
Demareeing — P. E. Braun ..... 341 - 342
The Control of Ants by DDT — Percy H. Wright 342
Summer is Just Around the Corner — Mrs. Benj. Nielsen 343
Swarming and Swarm Control — M. J. Deyell ..... 344 - 345
Live and Learn — Propolis Pete 346
Second Glances — C. M. Isaacson 347
A Talk to Beginners — M. J. Deyell ..... 348 - 351
Swarm Control Manipulations — E. S. Miller 351
Editorials ..... 352 - 354
From North, East, West and South ..... 355 - 361
American Beekeeping Federation — Glenn Gibson 362
American Honey Institute News Notes — Mrs. Harriett M. Grace 363
Caught Possum, not Skunk — R. E. Lyon ..... 364 - 365
The Pollen Moth — Allen Latham 365
Asked and Answered 366
There are Other Ways — Walter Byrd 367
Just News ..... 368 - 369
San Antonio Beekeepers' Meeting 369

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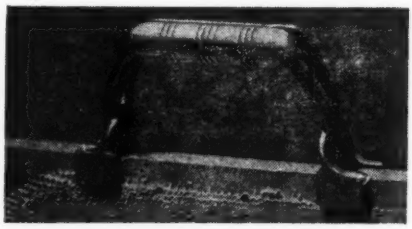

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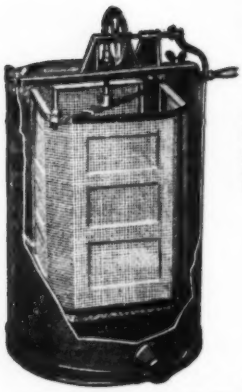

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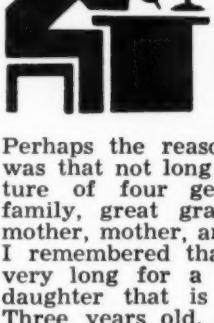

"When I read about George Demuth's three queens in a colony — grandmother, mother, and daughter — I thought at first the grandmother must be about three years old. Perhaps the reason I thought this was that not long ago I took a picture of four generations in our family, great grandmother, grandmother, mother, and daughter. Then I remembered that it doesn't take very long for a queen to have a daughter that is a laying queen. Three years old, — not so. That queen grandmother might be only three months old—could be, under favorable circumstances even young-

(Continued on page 380)

Monthly Honey Report

May 16, 1952

The following figures represent an expression of current prices from beekeepers and honey packers over the country. They are based on several reports from each state averaged with the reports in the region. Where insufficient information is returned, prices have been omitted from the chart. Where three figures appear on the chart the first figure represents the low, the middle figure represents the average, and the third figure the high price in cents per pound. Where only two figures are used the low and high are shown.

	North Atlantic	South Central	North Central	Mid-west	Pacific
Bulk Honey:					
Table Grade	11-13½c	9¼-15c	10-11-12c	10-12-15c	10¾-11¾-12c
Industrial Grade		8¼-14	8-9½-11	9-10½-12½	9-9½-10
Price to Grocers:					
5 lb. jar - can	22-26	17-20-25	15-17-21	15-16-18	15-18-25
3 lb. jar - 12's		20-25	16-24		
2 lb. jar - 12's		19-22-28	19-22-25	19-23-25	21-25-33
1 lb. jar - 24's	25-30	22-25-30	24-25-26	23-25-28	22-25
Comb Honey:					
Cs. of 24 Sec.	$9-10-12	$7.20-8	$7.20-8.25		
Retail Price:					
60 lb. can	15-20-30	18-20-25	15-16-20	14-15	15-17½-20
5 lb. jar	23-29-35	22-26-30	19-23-25	18½-21-25	18-24-30
3 lb. jar	30-33-37	24-29-34	23-26-29		
2 lb. jar	32-38	25-28-35	25-28-32	24-27-32	25-29½-35
1 lb. jar	32-38-40	30-32-35	27-32-35	25-30-33	28-32-37
Honey Sales:	Fair to Rapid	Fair to Rapid	Fair to Slow	Fair	Fair
Estimated Crop:					
Conditions based on normal %	92	90	99	102	114
Beeswax	45-58c	40-52c		40-52c	40-52c

NEW HONEY PRICE SUPPORTS ANNOUNCED

The United States Department of Agriculture announced an increased support price on a loan purchase agreement as follows: white table grade honey, 12¼c per pound; darker than white table grade honey, 11¾c per pound; and non-table grade honey, 10¼c per pound. The support price is ¾c lower in the far west. These new prices amount to an increase from 1¼c to 2c per pound over last year's support.

The new supports also provide for farm storage and warehouse loans to the producer. Application can be made for loans and purchase agreements directly with County PMA offices. Also and equally important to the honey price is the Diversion and Export Subsidy of 4½ cents per pound when put to new use or exported. (See p. 329 for details.) Let's also develop our own industry strength by supporting the American Honey Institute and the American Beekeeping Federation in their effort to promote greater use of honey.

A few comments are as follows:

New Jersey: - "In a general way honey is selling moderately in stores and roadside stands at this season."

Oklahoma: - "Bees short on stores. Season late. All honey sold."

Colorado: - "Very little left for sale in Western Colorado."

Colorado: - "Sold out."

Arkansas: - "Nearly all beekeepers sold out of honey. New crop soon."

Arizona: - "Thousands of tons of nectar and no bees to bring it in."

The general commodity price as reported in the Journal of Commerce for some 30 commodities stands at 295.8 as compared with 292.8 a month ago. 1938 is figured at 100.

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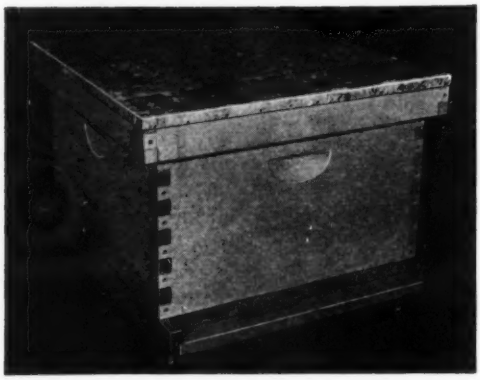

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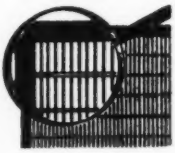

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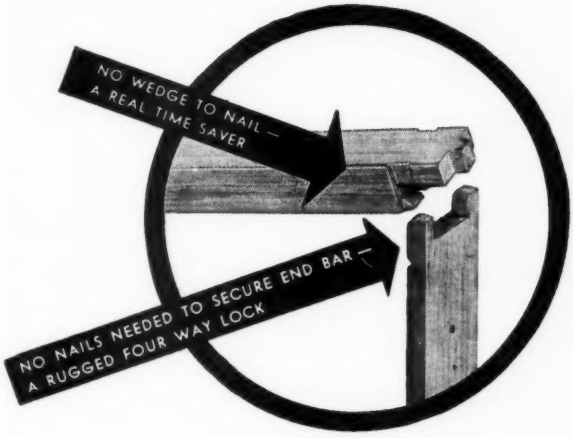

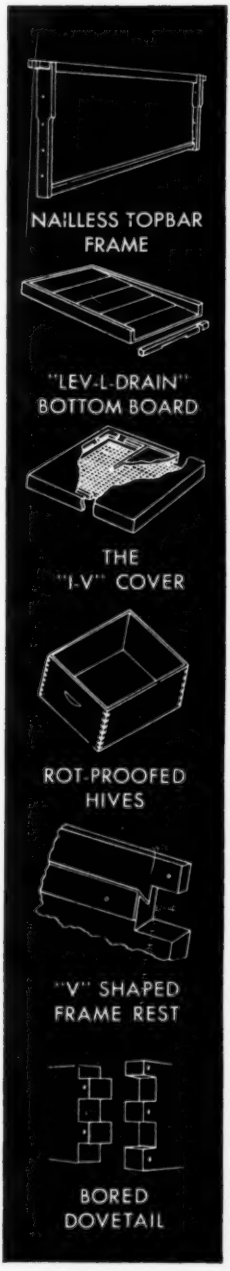

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Honey Price Support for 1952

The April 26 Bulletin of Federal Register carries the outline of the Honey Price Support program for the year 1952. The following is a digest:

The Secretary of Agriculture makes price support for extracted honey available through the Commodity Credit Corporation, CCC, and the Production and Marketing Administration, PMA. The program will be administered by the Fruit and Vegetable Branch, PMA, under the general direction and supervision of the President, CCC, and in the field it will be carried out by the PMA State and PMA County Committees. Producers interested in participating in the program should contact their county committee through which the price support documents will be distributed. All documents will be completed and approved by the county committee.

Loan Applications

Price support to producers on extracted honey will be made available through loans on such honey stored in approved farm-storage or in an approved warehouse, and through purchase agreements. Farm-storage and warehouse-storage loans and purchase agreements will be available wherever honey is produced in the continental United States. Application for price support should be made at the office of the county committee of the county in which the producer's place of operation is located or if producer has more than one place of operation to the office of the county committee of the county in which the honey is stored.

Loan Period

Loans and purchase agreements will be available from April 1, 1952, through October 31, 1952, in Florida, Georgia, South Carolina, Alabama, Mississippi, Louisiana, Texas, New Mexico, Arizona, and California. In all other States, loans and purchase agreements will be available from July 1, 1952, through December 31, 1952. Applicable documents must be signed by the producer and delivered to the county committee not later than the date applicable for the State concerned. Loans mature March 31, 1953, in all States.

Who is Eligible

An eligible producer shall be any individual, partnership, association, or corporation, producing extracted honey in 1952. Any group of eligible producers may designate in writing in the form or forms prescribed by CCC, an agent to act in their behalf in obtaining price support under this program. Eligible honey must have been produced and extracted in the continental United States by an eligible producer. It shall be packed in clean, sound,

XUM

transportable containers of a standard capacity of not less than five gallons nor greater than 70 gallons.

Service Charges

Service charges shall be paid by the producer on the quantity of honey placed under loan or specified in the purchase agreement, computed at the following rates: Farm-storage loan — 5c per 100 pounds with a minimum charge of $3.00. Warehouse loan—5c per 100 pounds with a minimum charge of $3.00. Purchase agreements—2½c per 100 pounds with a minimum charge of $1.50.

How Graded

The net weight of honey offered for a farm-storage loan shall be the number of full containers multiplied by the following standard net weight for each size container: Five gallon honey cans which are full shall be considered to contain 59 pounds net weight, and full containers of larger size shall be considered to contain 11.8 pounds net weight for each gallon of rated capacity. The grade of honey in connection with applications for either farm-storage or warehouse-storage loans shall be made by the area inspection office of the Processed Products Standardization and Inspection Division, Fruit and Vegetable Branch, PMA, on the basis of samples drawn and submitted by the county committee.

Interest Rate

Loans shall bear interest at the rate of 3½ percent per annum and interest shall accrue from the date of disbursement of the loan, notwithstanding the printed provisions of the note.

Loans will be made, and honey delivered under purchase agreements will be purchased at the support prices set forth below:

For States of Montana, Wyoming, Colorado, New Mexico, and States west thereof:

	Cents per lb.
1. White or lighter table honey	11.50
2. Darker than white table honey	11.00
3. Non-table honey	9.50

For all States east of Montana, Wyoming, Colorado and New Mexico:

	Cents per lb.
1. White or lighter table honey	12.25
2. Darker than white table honey	11.75
3. Non-table honey	10.25

"Table Honey" refers to honey of a flavor which can be readily marketed for table use in all parts of the country.

How Program Works

The 1952 Support Program is distinctly a producer's program as compared to the Programs for 1950 and 1951. Packers no longer contract with governmental agencies to pack honey accepted from the producers at the Support price. Instead, packers this season are permitted to purchase at whatever price they can, but if a producer finds offers for his honey unacceptable, he is privileged to place his honey under loan and, by so doing, will receive a loan equivalent to the support price less small fees for a Quality Certificate, etc. If the producer elects to turn his honey to the Government on "take-over day", he may do so without payment of interest. If he removes his honey from the loan, he is charged 3½ percent interest. The only individuals required to pay at least the support price for honey this season are the exporters who must certify they have paid that price before they can obtain their subsidy.

This program is the type requested by the American Beekeeping Federation but falls short by five percent to reach the level of support requested.

Additional Help

Also very closely related to the announcement of a sales promotional program by the Federation was the approval by the Food Distribution Branch of PMA, of an extensive promotional program for honey to move more of the 1952 crop through normal trade channels and less of it to the government under the support program. It will enlist the cooperation and the support of all those in the food distribution field and will reach its peak in October, at the very time the bulk of the crop is ready to move to market.

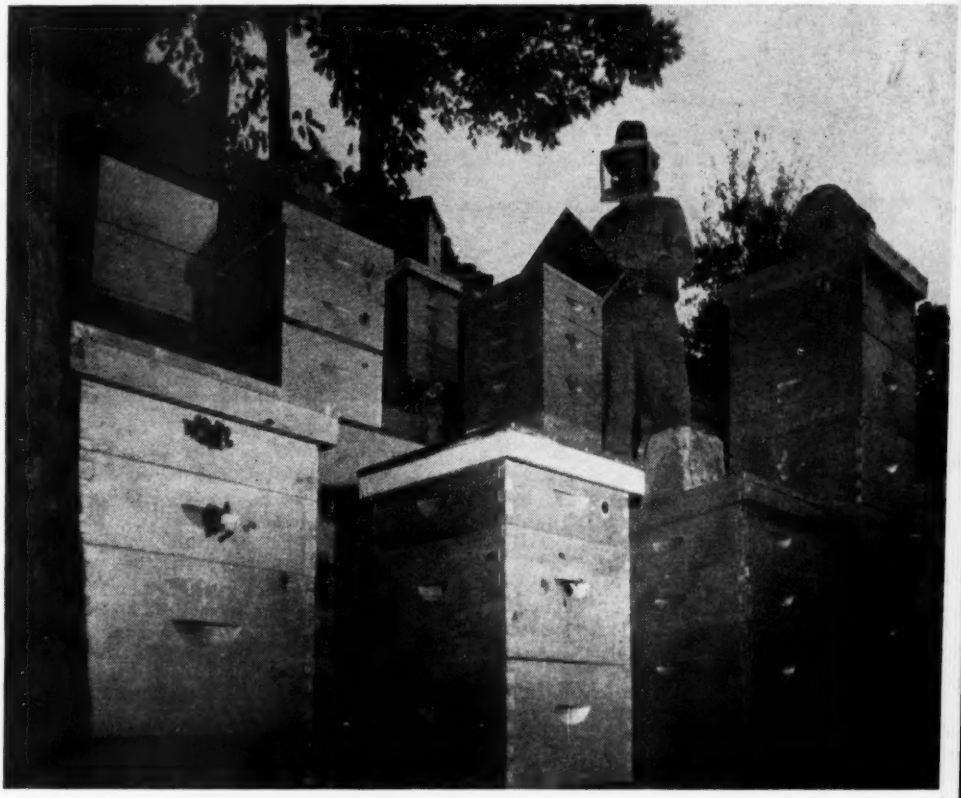
A Challenge to the Industry

The whole program becomes a challenge to the industry to ensure that the support level becomes a floor price for honey at wholesale, that honey moves to the consumer in an orderly manner and through normal channels of marketing, and that the government does not buy any substantial part of the 1952 crop.

The temporary help of the support program can be of permanent service to the industry only if producers continue and increase their financial support of the work of the American Honey Institute and the American Beekeeping Federation.

Black Diamond and Yellow Gold

By John Walsh, Jr., Pine Creek, W. Va.
A Coal Mining Beekeeper Enjoys His Bees



In the mountains of West Virginia, the rows of hives have to be set up in tiers, one above another.

Here in the heart of the million dollar coal fields of southern West Virginia, in Logan and Mingo Counties, is the home of Scarlet Flame fuel, one of the best grades of coal in the mountain state, mined and produced by the Island Creek Coal Company, Holden, West Virginia. This company owns and leases thousands of acres of mountain territory in Logan and Mingo Counties, which have good second growth timber of basswood, sourwood, hickory, beech, oak, walnut, blackgum, poplar, dogwood, sumac, redwood, maple, and a variety of other small shrubs. All of these trees and shrubs are of great importance to a beekeeper.

As an employee of this company, my job is taking care of 650 miners' lamps. So I do not have much spare time for taking care of bees. But I have learned a good deal in the past six years. I would like to give a few points as to the possibilities and success that any one who keeps bees in this locality may and can expect from their bees.

There are several beekeepers here in Logan and Mingo Counties who keep from five to 40 hives of bees, but do not get as much as a 15 to 20 pound surplus of honey each year. In the six years I have been studying beekeeping here in the mountain state I find that with proper management from year to year one can expect from 40 to 100 pounds of surplus from good strong colonies. In this locality most bee-

It required considerable work to put up a wall so the hives could set level. When this photo was taken several supers had been removed. A total of 1064 pounds of honey was secured in 1948.

keeper's failures are due to old queens and not taking proper care of the bees. Most of them still prefer the old blacks, but I find that with today's modern hives and young yellow or gray queens with thousands of young bees in a two brood chamber hive, they will put up from 150 to 200 pounds in a good season.

However, one does not just set them up on the hillside, and say go after it. It takes work and management and is not a lazy man's job. One gets out of it what is put into it. Nothing else can be expected.

The beekeeping year in this mountain state begins in August, as this is the time of year one leaves from 80 to 100 pounds of honey in two brood chambers and at least three to five frames of pollen.

If a lot of beekeepers I know would do this, I am sure they would not loose their bees each and every year as is reported to me each spring. It seems that they just can't realize that it takes a lot of honey for a strong colony to live on during the eight months no nectar or pollen is available, and therefore, their best colonies starve before the next spring or sometimes even in early fall.

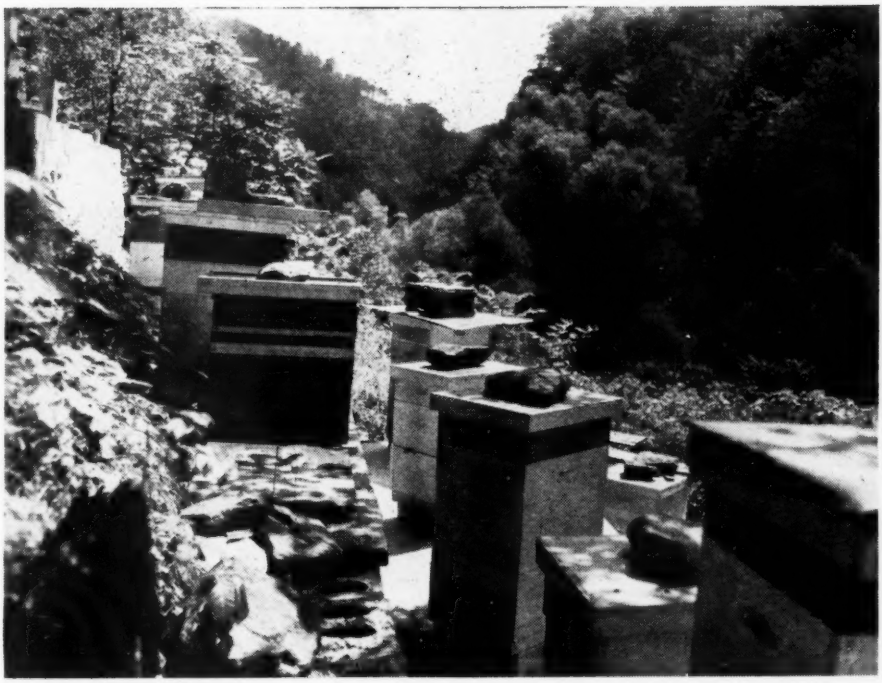
In this locality, and it goes for most of the state as well, most honey and pollen comes from the steep mountain sides. Some localities are better than others.

If a surplus of from 80 to 100 pounds is left in two brood chambers at the end of August, all colonies going into winter with proper wind protection and headed by a young queen with plenty of natural pollen will come through the mild winters in the best of condition.

Pollen from maple and redwood is usually plentiful here in early spring. This starts strong colonies to rearing some brood as early as January or early February. I have seen sealed brood in good strong wintered-over colonies by the last of January or first of February. If an early spring comes, such hives will be extra strong by the last of May.

Very little farming or fruit growing is done here in the coal fields as there is very little level land that is suitable for farming. A little gardening is done on the steep hillsides. To get bees far enough away from the highways or dwelling houses, they must be set on the hillside.

However, this is just what is needed if they face the south, as the sloping hill makes fine drainage. My bees face south and the early morning sun hits them around 6:00 or 6:30 in the spring and summer. They are well shaded from 12 noon until sundown. I have had only three swarms in three seasons. All queens are clipped in early spring.



Looking south from the apiary. The mine where I work is less than one-half mile directly east. There is plenty of basswood and tulip poplar in reach of my bees, and the willows in the creek below supply early pollen. The mountains here are high and rough with plenty of second growth timber.

Each of my colonies were requeened in July with young queens.

Strong colonies in early spring can and will have from 12 to 15 frames of sealed brood by the last of May just before the main flow begins from basswood and sumac. The beekeeper who knows a little about swarm control can and will get a good honey crop if basswood and sumac bloom. Both seldom fail, but basswood blighted here in this locality this season. However, sumac was heavy with bloom and strong colonies stored as much as 100 or 150 pounds surplus during the three weeks it was in bloom.

My bees did fine this past season, considering the surplus that other local beekeepers got, as very few had any honey for sale this year.

Selling the Crop

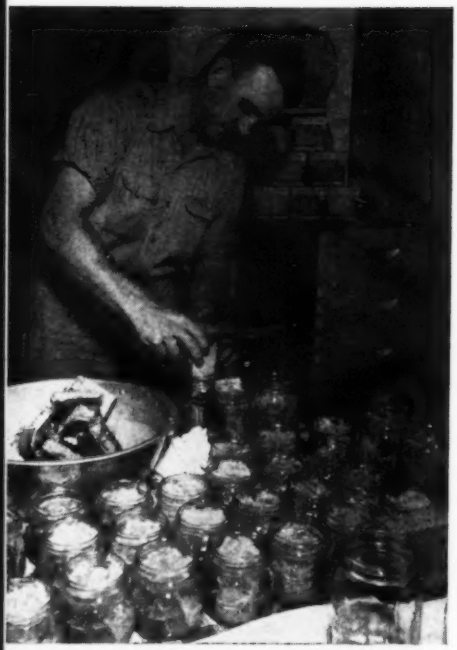
My honey is sold in pints, quarts, and half-gallon jars. I also produce some section comb honey and for the last four years have had very little trouble selling my crop. Once a customer, always a customer.

Some beekeepers have told me their best colonies have died out. This is due to old queens, robbing too close at the end of the honey flow, not taking care of the bees as they should, and not leaving a surplus of from 80 to 100 pounds for a strong colony in the two hive bodies.

My bees are left not less than 80 pounds of early gathered honey and from three to five frames of pollen at the end of the main flow the last of July. No honey at all is taken from the two brood chambers. This I leave for the coming winter and early spring. They have the feeling of "millions at their house", and as has been proven for six years it pays handsomely the following season.

Supering usually begins here about the first of June as I give the bees all they get from early spring up until the main flow begins from basswood and sumac. Both of these flowers produce a very light-colored honey and also make a very fine section comb honey.

I have enough supers ready for the strong colonies and if extra strong, I give two supers at once. It is amazing how fast a good strong colony can fill supers when basswood is in full bloom.



The biggest job a beekeeper has is putting his product up in cans. This has to be done with the utmost care so as to have a product which will sell quickly. My honey is put up in pints, quarts and half-gallon jars, as well as one-pound sections.

The past two seasons have been fair in this locality, because of too much rain at the wrong time, but I have gotten a good crop both seasons because of a lot of work at the right time.

Listening to Bees in Hive at Night

Did any of you beekeepers ever visit your apiary at night and listen to the roar of the thousands of fanning bees at the entrance of the hive? The first time I heard this, being a coal miner, I thought of the fanning system that is used at any and all coal mines here in the mountain state. This fanning of bees is either for driving off the water from the freshly-gathered nectar, or regulating the temperature inside the hives. My bees can be heard 50 yards away during June and July when basswood is in full bloom and nectar is coming in rapidly. One can strike a match and put it to the

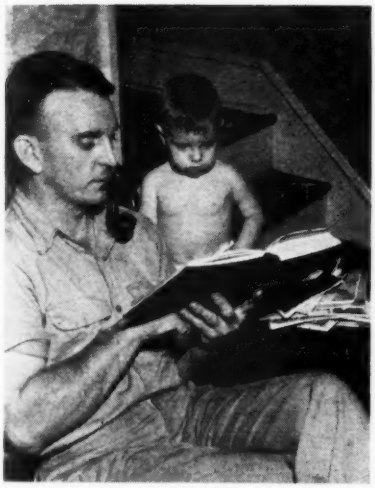
A close-up of some of my 1948 crop of basswood and tulip-poplar. The section honey is pure basswood and was from my first year's effort at producing section comb honey.

right corner of the entrance and the blaze will be pulled inside. Put it to the left side and it will be blown out by the force of air coming out from inside the hive. So a coal miner has to have fresh air to stay four or five hundred feet under ground. The big fan that pulls the air under ground for the miners pushes and pulls it all through the honeycombed sections of the mine, then out several miles from the entrance. So do the honey bees force fresh air through all parts of the hive.

A close call here. A cloudburst caused a slide which passed so close to my apiary that large rocks and small trees rushing down the mountain threw dirt and mud on the two hives at the far left. Notice the large stones below the hives which were left by the slide.

Ample Ventilation Essential

A hive gets awful uncomfortable in June and July unless the beekeeper provides proper ventilation.



Reading about bees to my son, Don Jean.

A morning catch on Twelve Pole Creek. The big fellow on the left was 16 inches long and put up a real scrap.

I block up the front with one inch blocks during these two months and have had good results by doing so.

Again one thinks of the way that the loading machine goes in and out of the working places on each section of the mine to load the coal into coal cars. The gathering motors haul it to the side track, the trip motors gather the coal and take it to the dump. Dumper dumps it into the skip, up the shaft to the tipple, through the tipple on separating screens, down the conveyors to the rail road cars, to distant points of the U. S. A.

So does the honey bee go to this flower and that gathering up load after load of nectar, flying home to load the hundreds of cells in the comb. Up and down the mountain sides gathering nectar and pollen, separating the nectar and pollen, and the surplus that is stored in the supers will be screened and canned for the different honey lovers to buy and ship to different points of the state. So goes black diamond and yellow gold.

Honey Recipe Box

The American Honey Institute has a brand new piece of promotion in the form of a "Favorite Honey Recipes" box. The box itself is colorful and attractive, printed in three colors. Each box will contain a set of index cards, 64 recipe cards, 32 of which will have a honey recipe printed on one side and the picture of the finished product on the other side. The 32 cards will have a honey recipe or menus or use of honey in some other way printed on one side.

You will want a box for yourself and more for your friends. This box will make a most acceptable gift for any occasion. You'll want to see that every bride and her mother has one. The box will be mailed in a heavy corrugated container, postage paid, for $1.00. These boxes may be had with either red or green as the predominating color.

Why not send your order today so as to receive one of the first boxes! A price on orders of twelve or more may be had by writing American Honey Institute, Commercial State Bank Bldg., Madison 3, Wisconsin.

Beekeeping in Alberta, Canada

By W. G. le Maistre, Provincial Apiarist, Edmonton, Alberta

A typical parkland location in the Province of Alberta.

The Province of Alberta is roughly 310 miles from east to west. It extends some 750 miles to the northward from the 49th parallel. It is bounded on the west by the Rocky Mountains and on the east by the Province of Saskatchewan.

It is in these Rocky Mountains that many great rivers are born. One, the Columbia, flows into the Pacific Ocean; another via the Missouri into the Atlantic Ocean, and many others into the Arctic Ocean.

Though Alberta is bounded by mountains and foothills on the west, the Province is mostly a part of the great central plains, sometimes flat, sometimes rolling. It is well supplied with large rivers fed from the melting snows in the mountains. The southeastern part of the Province is characterized by low precipitation and sparce growth, the north and west by parkland and forest. In the main, elevations are from 3,000 feet above sea level in the southwest to 1,000 feet in the northeast.

The frost free growing period varies from 145 days in the southeast to 100 days in the north. Precipitation is about 13 inches in the south, 18 inches in the Central area and 12 inches in the North. The number of hours of bright sunshine is 2,300 in the south and 2,100 hours in the north. Of this total sunshine, 1,178 hours occur during the growing season in the south and 1,077 hours in the north. In the Peace River district (which is 500 miles north of the International border) the sun rises at 4:14 a. m. and does not set till 9:55 p. m. on a mid-summer's day. It does not become dark at night in mid-summer. Temperatures are sometimes cooler than could be wished for beekeeping, but on the whole seem to be high enough. The average daily maximum (June to August) is 76° F. in the south, 72° in the center and north of the Province.

In the drier areas of the south and east, about 800,000 acres are irrigated, with another 500,000 acres soon to be added.

Practically all types of farming are to be found in Alberta. Canning crops on irrigation in the south; ranching on the foothills and plains; wheat and coarse grains in all areas;

A map showing position of Alberta between the 49th and 60th parallels. The Artic Circle is at the 80th.

mixed farming in western, central and northern areas. Forage crop seeds, including alsike, red clover, sweet clover, white dutch, and al falfa are grown extensively in the mixed farming districts. Alberta produces about half Canada's legume seeds.

Beekeeping developed quite rapidly during World War II. It has persistently declined since. This is largely attributed to the fact that the price of honey to the producer compares unfavorably with his costs of production and returns to be made from alternative enterprises.

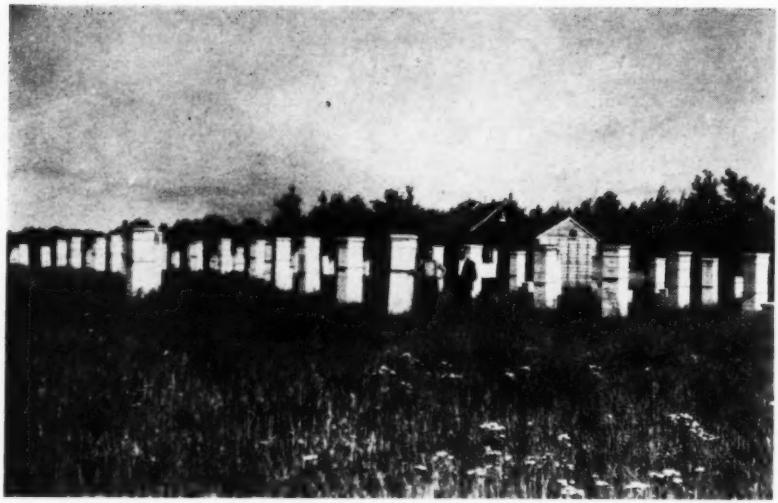
A survey of honey production costs was conducted in 1948. It covered some 5,500 colonies and 12 producers. It indicated that it was costing about 12 cents per pound to produce honey, when the average yield per colony was 130 pounds. Where the yield per colony was less in that year the cost per pound was higher; and where the yield per colony was larger the cost per pound was, of course, lower. Costs of producing honey in Alberta have risen since 1948 and only the efficient operator, harvesting a relatively high yield per colony, can remain in business.

Year	Number of Colonies	Av. Yield Per Colony
1942	27,500	91
1943	42,500	89
1944	57,000	90
1945	63,000	95
1946	72,000	86
1947	77,600	84
1948	82,200	125
1949	55,000	106
1950	49,000	99
1951	42,100	119

Honey Flows

Nectar becomes available about mid-April in small quantities from willows. Intermittent flows persist throughout May to early June from successions of willow, dandelion, and wild fruit blooms. These flows are unreliable as periods of bad weather often limit bee flight. However, they generally provide enough pollen and nectar to stimulate colony build up. In most seasons 20 pounds of honey—saved in combs from the previous year—are sufficient for the beekeeper to provide as spring food.

A period of dearth, lasting about two weeks, occurs in June. The main honey flow begins about mid-June in the south and the end of June in the north. This flow is from alsike, white dutch, red clo-



A large apiary supered for the flow.

ver, sweet clover, and alfalfa. Fireweed, wild raspberries, and other wild flowers often contribute significantly. Except in occasional seasons the main part of the flow ends by mid-August. A light flow persists through to the first week of September.

Probably 95 percent of the honey is water white in color in normal seasons. In poor years, or areas that experience drought conditions, amber or even dark honey may appear. The water content is generally from 14.5 percent to 17.5 percent. The occasional season with exceptionally heavy precipitation or cool weather during the flow will result in much of the honey being higher in water content. 1951 was such a season.

Unseasonal (mid-summer) frosts occasionally occur in restricted areas. When these frosts occur, even though ample bloom persists, the secretion of nectar ceases. This situation is not common, but where it covers a district in which colonies are located it is serious for the beekeeper, unless he can move to new sites.

Some very remarkable yields have been authenticated from time to time. In 1936 a scale colony gained 36 pounds in one day and 72 pounds in four days. Gains of 20 to 30 pounds in one day are not uncommon. Two colonies in 1938 gathered 475 pounds and 525 pounds each —a total of half a ton of honey. In 1951 a beekeeper extracted 1150 pounds from two colonies.

These yields go to show that when conditions are favorable some remarkable results can be achieved. However, it is only occasionally that really high yields are harvested under commercial conditions as the table showing average yields shows. On the average, though, the honey flow may extend over six weeks. There are only ten to fifteen good honey-flow days in any one year.

Beekeeping Practices

Because winters are long—October to March—and severe, only about 10 percent of the colonies are packed for winter. Out of this number about 30 percent die or are too weak to make colonies the following spring.

Colonies are commonly established in April or early May from two or three pound packages imported from the United States. These have to be built up to harvesting strength within six or eight weeks. They are often still building up when the flow begins.

Swarm control is not too difficult in most seasons. Many of the queen cells built are for supersedure. Because the flow is very intense at times, four and five supers are required for each hive. Extracting begins in July. Queens are often

Colonies can be wintered, but it's not easy.

killed or caged in early August, so that when the colonies are killed with cyanogas in September there is no brood in the brood chamber.

Experience has demonstrated that apiaries yield better when there are not more than 40 colonies in them. There are many larger yards established particularly in the irrigated areas, but on the whole better colony yields are obtained where the colonies are distributed.

Marketing

Though many beekeepers pack in two, four, and eight pound lithographed tins, there are four packing plants, two of them cooperatives, which handle honey in 70-pound drums.

There is a fair local demand for honey, however. The population is slightly less than 1,000,000 and normally a considerable quantity of honey is shipped to British Columbia where honey production is less and population greater. The retail price of honey has been from 79 cents to 85 cents for a four-pound tin since last fall.

Diseases

Diseases, particularly American foulbrood, are fairly widely distributed over the Province. A very persistent type of European foulbrood has made it's appearance from time to time. There has been an occasional serious outbreak of Nosema.

The Apicultural Branch of the Department of Agriculture administers the Bee Diseases Act. Under this Act a staff of inspectors operate. The Act requires all beekeepers to register annually, permits inspectors to enter all apiaries and examine colonies, and requires the destruction of all bees and material affected by any malignant disease.

It is necessary to have a permit to move used bee equipment. In the case of commercial operators having out-apiaries, seasonal permits are issued that cover the locations between which the beekeeper wishes to move. These locations are all registered on a map and before a seasonal permit is issued the locations are checked.

Should a beekeeper apply for a permit to move to a location already occupied, or too close to another apiary he is denied his request. It is possible in this manner to prevent over-crowding. It also tends to check the spread of disease.

The Department has developed and put into use a wax melting tank which, as a means of cleaning up diseased outfits, has been a boon to the industry in Alberta.

In the past, the common practice by the inspection staff was to burn diseased equipment that could not be sterilized. Where large numbers of supers and combs were involved or where super infection was suspected, but could not be proved, the beekeeper was persuaded he should melt up all his combs and scorch his supers during the inactive season. Too often this was not efficiently done or not done at all.

Now the inspectors go with their tanks and supervise the work on the spot. This has resulted in salvaging everything but the frames for the

The wax-melting tank in operation.

beekeeper. A thorough clean-up job is done and done quickly before any robbing or spread of disease can occur. Furthermore, when the beekeeper realizes that there is good salvage value he is less likely to hold back any equipment for use that still might be infected.

Briefly, the wax melting tank is about five feet long and three feet, six inches wide, and three feet deep. In the bottom are flues similar to those used by roofing firms for melting pitch. These flues are covered with water, and a propane gas burner is used to boil the water. The combs are placed in wire baskets that hang over a pan having an outlet through the tank at one side. A wax separator is used—sometimes there is honey in the combs being melted. A fairly tight lid is used.

The steam melts the wax out of the combs remarkably well. The average wax yield from a super is two and one half to two and three fourths pounds. Under good conditions this tank will handle about 150 supers a day and 400 pounds of wax.

Burners are used to scorch supers, tops, and bottoms. Slumgum and frames are burnt in a pit on the site. The whole outfit can be loaded on a two-wheel trailer and hauled by a car.

This system has been in operation only two or three years but it has already paid for itself in saving time and expense for second trips by inspectors. From the beekeeper's stand-point it has salvaged a great deal of valuable wax and cleaned up a great deal of probably infected material.

It has not been possible to obtain satisfactory results controlling diseases with sulfa drugs. It is believed that spring honey flows are often just sufficient that the nurse bees do not feed the medicated syrup to the brood in large enough or frequent enough doses that it can counteract the development of B. larvae. Relatively few colonies are wintered so there is not much opportunity to load brood nests with sulfa syrup in the fall.

Pollination

Very little solid evidence has been accumulated in relation to the effects of honey bees as pollinators of the clovers and alfalfa in Alberta.

In 1948 screened plots of alsike and red clover were set out. On eight plots, from which all insects were excluded, the seed yield was at the rate of 24 pounds per acre on alsike and 23 pounds per acre on red clover. Outside the cages, where both honey bees and wild bees worked, the yields were 463 pounds on alsike and 375 pounds on red clover.

A few beekeepers have made contracts with seed growers and receive a share of the increase in seed yield over the acreage for the area. Some of these have paid both the seed grower and the beekeeper well.

There is a fair demand by farmers to have beekeepers place colonies on their crops. The practice is still common, however, for a beekeeper to pay the farmer for a location.

Correction in Who's Who in Apiculture—Kentucky offers now and has offered for many years a course in beekeeping, with W. A. Price, University of Kentucky, Lexington, as the professor in charge.

Demareeing

By P. E. Braun, Cairo, Nebraska

During the last 25 years I have done a lot of Demareeing. Some beekeepers tell me that this is old-fashioned and out of date. Maybe so, but another way of looking at it is, that this is a tried and true method that has stood the test of time. At any rate I am going to continue to do a lot of Demareeing until I can find another method that will hold my swarming down to two percent.

Before and after Demareeing. Hive on left just Demareed. Hive on right is next. All excluders are painted red. Screens, etc. painted other colors, thus identification is easy.

I will say that my swarming has been around two percent until the year of 1950. I did most of my Demareeing in June as always. However, we got about three weeks of bad weather in July, cold, rainy, and continuously cloudy. The scale hive said that some days honey came in and some days it didn't. As the bees were doing a lot of loafing, this brought on some swarming in late July and early August. So my swarming for 1950 was about 15 percent. However, Demareeing did hold them until the clover flow was practically over.

Drastic Swarm Control Measures Necessary

In Nebraska our honey flows are long, slow, and more or less erratic, ideal for the production of swarms. So some rather drastic method of swarm control is highly essential. Giving plenty of room is not the answer. Bees can, and do, swarm out of a barrel.

So my personal answer to this problem is Demareeing. Demareeing is highly practical for any beekeeper running 500 colonies or less per man. If you operate much over this number you probably wouldn't have the time. However, if you have never tried this, you may have more time than you think. I never wait for a colony to start cells before I Demaree. If the spring build-up has been satisfactory the colonies are at swarming strength about the time the first sweet clover blooms. Then is when I start Demareeing. I Demaree the strongest first. Then, when going through these eight to ten days later, to cut cells, I also Demaree some more that have built up in the meantime. This process is repeated until Demareeing is done for the season. Thus the work can be spread over a considerable period of time.

One never has to worry about a Demareed colony going into the supers because Demareeing puts them there.

If honey is coming in and the weather is nice I can Demaree five to eight colonies per hour by the regular method of hunting the queens out and placing the frame they are on below. However, last year we had long periods of bad weather. This wasn't so good because the bees would run on the combs and ball at the corners (and sting) so that it was impossible to find the queens. In casting about for a way out of this situation I bethought myself of my **acid boards***

[G. W. Demaree, Christiansburg, Kentucky, a skillful beekeeper who contributed articles to bee journals during the later part of the nineteenth century, is credited with being the originator of the idea of raising most of the combs of brood into supers above the queen excluder at the beginning of the main honey flow, leaving the queen below the excluder,—this to relieve congestion in the brood chamber, to control swarming.—Ed.]

*[An acid board used by some commercial beekeepers for removing surplus honey consists of a regular telescope hive cover equipped with a piece of burlap fastened to the top of the inside by means of a shallow rim to prevent the burlap from coming in contact with the tops of the frames when in use. A small amount of carbolic acid is sprinkled (with a clothes sprinkler) on the burlap, then the acid cover is placed on top of the super or supers of honey to be removed. The acid drives the bees down into the brood chamber below. The weather should be warm or hot in order to have this method work well.—Ed.]

that I use for removing honey.

Using Acid Boards

I put my hive-body of empty comb on the bottom board after first removing the bodies containing the bees to one side. I then stacked the bees back on this empty body and put my acid board on. After arranging eight to ten colonies this way I would go back to the first one and find the bees pretty well run into the bottom. If some were clustered out of the entrance that was all right too. I was Demareeing without finding or seeing the queen. The work was going as fast or faster in bad weather than it did by the queen-finding method in good weather. I had discovered a method that I had, personally, never seen mentioned in any book or bee journal. Hence this article.

Henceforth, acid boards will be a standard part of my Demareeing equipment. Always, before, if I couldn't find an occasional queen, I would resort to the shaking method, which is slow and time consuming. In the future, I will not spend much time on these colonies, but simply resort to an acid board. One will, occasionally, fail to get the queen down by the acid method but this can be corrected on the next visit for cell cutting.

The only draw-back to this method is that it involves quite a bit of lifting as the bodies have to be lifted off the bottom board to get the new brood chamber in place and after the bees are down the top bodies have to be taken off, or at least tilted, to get the excluder in place. So my future Demareeing will be accomplished either by finding the queen, or using an acid board, depending on how quiet the bees are.

The Control of Ants by DDT

By Percy H. Wright, Moose Range, Sask.

Much has been written about the control of ants in apiaries, but, as time passes, I become more and more convinced that beekeepers in general are too much inclined to minimize a serious problem, and let the bees fight it out as best they can. In our northern woods, where decaying sticks and roots are everywhere and insure a high population of wood-eating ants, the problem is big enough. In the hot lands south of us, it must be many times as big.

The problem is not only to control the ants, or at least to keep them out of the beehives, but to do it as cheaply as possible. I have come to believe that the cheapest and simplest and most convenient way to do it is by using DDT as a deterrent to the ants. It is easy to make the ants come into contact with a poisoned surface, for they must climb up the entire hive, including the hive stand, and may even touch the bottom of the bottom board. The bees, on the other hand, can enter somewhat higher up, and as is well known, they do not do much nosing around under the bottom board.

Probably the best thing would be to choose a damaged shallow super, spray it well with DDT spray, inside and out, and place it on two two-by-fours of suitable length, then the bottom board on top of this. The space made between the shallow super and the ground by the two-by-fours would permit one to insert the rubber end of a spraying apparatus, and to spray the inside of the shallow repeatedly during the summer, without the nuisance of having to dismantle the hive. In order to avoid any chance of contaminating the bottom of the bottom board at a time when it might be turned the other way up, one could place several layers of newspaper between the shallow and the bottom board. Probably still better would be to allow the bottom of the bottom board, if it is tight, to be sprayed too, and avoid henceforth using the shallow side of all bottom boards. There is not much purpose in their shallow side anyway.

The raising of the height of the whole hive by the height of a shallow super would be a disadvantage, especially in the country where beehives are commonly built up so high that one can scarcely reach the top supers without something to stand on. This disadvantage, however, would be offset by the greater difficulty of mice and skunks in getting at the entrance of the hive, and by making it unnecessary to cut the grass about the hive quite so short.

Summer is Just Around the Corner

By Mrs. Benj. Nielsen
Aurora, Nebr.

Honey fudge bars are excellent keepers — if well hidden. — Photo courtesy Kellogg Co.

While the calendar warns us that hot days are just around the corner, Mother Nature sends us a sample scorcher now and then to remind us of what lies ahead. Tall, frosty, thirst-quenching drinks will be in great demand. And, in this category, honey drinks excel. In addition to a subtle, tantalizing flavor they provide the quick energy so necessary to revitalize us on torrid summer days when vitality and energy are at low ebb.

If you are in the class of homemakers who insist upon milk in the diet regularly winter or summer, try honey-way eggnogs for super nourishment. The honey flavors mask the raw egg taste objectionable to some, and which some people cannot tolerate over a long period of time. Honey flavors as it sweetens. Use two to three teaspoonsful of honey to each glass, depending upon personal taste. Blend with a small portion of milk, add to well beaten egg, fill glass with cold milk, and serve thoroughly chilled. Vanilla flavoring is optional, and a dash of nutmeg, atop the ready-to-serve drink, is also optional.

One convalescent reported nausea to a doctor who had ordered an abundance of eggnogs to supplement diet for buildup. He recommended that the egg be cut through three or four times, rather than beaten, to avoid the raw egg taste causing the difficulty. This proved most successful.

If chocolate milk is a favorite at your house, blend melted chocolate, or cocoa, and honey and refrigerate to have on hand for quickie drinks for the small fry.

There's no better thirst quencher than honey sweetened lemonade. The lemon juice and honey concentrate may be mixed and kept refrigerated ready for dilution and ice.

And, while you are waiting for fresh green beans from the garden, try:

Hot Green Bean Slaw

Four strips bacon, 2 tablespoons chopped onion, 3 tablespoons flour, 1 can green beans, 4 tablespoons vinegar, ½ teaspoon salt, 1 tablespoon prepared mustard, 1 tablespoon honey, 3 cups shredded cabbage, and 6 radishes, sliced.

Fry bacon until crisp. Drain and crumble. Add onion to bacon drippings and cook until tender, but not brown. Add flour and stir to a smooth paste. Drain beans; add liquid to flour mixture and cook, stirring constantly, until mixture thickens. Add vinegar, salt, prepared mustard and honey. Mix well. Add beans and heat to serving temperature. Remove from heat and toss with cabbage, radishes, and crumbled bacon. Serves six.

Honey Fudge Squares

Three squares unsweetened chocolate, ⅓ cup shortening, 2 eggs, ½ cup sugar, ½ cup honey, ⅔ cup sifted flour, ½ cup ready-to-eat bran, ½ cup raisins, and 1 teaspoon vanilla.

Melt chocolate and shortening over hot water. Beat eggs very well, add sugar and honey gradually and continue beating until light. Stir in melted chocolate. Add flour, bran, raisins, and vanilla and stir only until combined. Spread in greased baking pan, 8 x 8 inches, making a layer about ⅓ inch thick. Bake in preheated moderate oven, 375 degrees F., about 25 to 30 minutes. Yield: 16 2-inch squares.

Swarming and Swarm Control

By M. J. Deyell

June is usually a month of swarming in the North. A bad swarming year is usually a good honey year. Perhaps more has been said and written about swarming than any other phase of beekeeping. Those who have not read the chapter entitled, "The Swarm" in "The Life of the Bee", by Maeterlinck, have missed something—especially from the standpoint of enjoying some of the best in literature.

There may be a few beekeepers —those who produce section comb honey in one apiary and live with their bees during the summer—who do not stress swarm control. Such beekeepers have each queen clipped and manipulate each hive from which a swarm issues in such a way that full advantage is taken of the unusual vigor with which a swarm works after being hived. It is truly amazing what a large swarm will do in storing surplus honey—if hived at the beginning of a good honey flow. The nurse bees have no larvae to feed for at least four days, therefore most of the bees are released for field work.

When we read carefully the article in this issue, "There Are Other Ways", page 367, by Walter Byrd, we may wonder how much some of us who are supposed to know, do actually know about securing the maximum honey crop. Be that as it may, the general consensus at present seems to be that applying swarm control measures is desirable. In fact, such seems imperative where out-apiaries are maintained and visited only periodically during the active season.

It was my pleasure and privilege to have been associated with the late George S. Demuth, former editor of Gleanings, for 13 years. Prior to his coming to Medina in 1920 he had for eight years been apicultural assistant to the late Dr. E. F. Phillips, of the Bureau of Entomology, Washington, D. C. While Mr. Demuth was in Washington, also while he was editor of Gleanings, he maintained a sizable apiary of close to 200 hives near Peru, Indiana, his home, where he had kept bees since he was eleven years old. He is now recognized as having been one of the leading authorities on section comb honey production, swarm control, and bee behavior.

In 1921, Mr. Demuth brought out Farmers Bulletin No. 1198, "Swarm Control"—a classic on this subject. At this time we can do no better than to use the summary of this bulletin which follows:

"Among the factors that contribute to the tendency to swarm are (1) those connected with inbred characteristics, (2) those connected with the size, shape, and arrangement of the hives and the character of the combs (immediate environment), and (3) those connected with the distribution of the bees as brought about by the peculiarities of the season, the locality, and the management (general environment).

"Inbred characteristics. — Some strains of bees have a stronger tendency to swarm than others. **To**

some extent, therefore, swarming may be reduced by careful selection in breeding.

"The hive and combs. — Colonies of bees having large brood chambers are less inclined to swarm than those having brood chambers too small. Strong colonies having good queens may need 60,000 to 70,000 cells for the rearing of brood, during the period of extensive brood rearing in the spring, in addition to the cells used for the storage of honey and pollen.

"Colonies of bees having good combs throughout are less inclined to swarm than colonies having poor combs. Inferior combs may greatly increase the tendency to swarm, both by reducing the amount of available brood-rearing space and by acting as barriers in the way of a free expansion of the brood nest.

"Spaces for idle bees, especially within the brood nest, may reduce the tendency to swarm. Such space may be provided by wide spacing of the combs or by a deep space below the frames.

"Colonies in hives which are well ventilated and well protected from the direct rays of the sun are less inclined to swarm than those in poorly ventilated hives exposed to the sun. Ample ventilation should be provided, hives should be painted white, and if the weather is hot during the swarming season shade boards should be used.

"Distribution of bees within the hives.—Probably the greatest single factor in the cause of swarming is a congestion of unemployed bees within the brood nest or discomfort in this part of the hive from overheating and lack of ventilation. Colonies which build a barrier of sealed honey around the brood nest during the spring, thus confining their activities to this limited space may be inclined to swarm even when there is an abundance of empty comb in other parts of the hive.

"When the bees increase brood rearing in the spring so rapidly that young bees accumulate faster than they are able to take up work in the hive outside of the brood nest, the tendency to swarm is usually strong unless there is a dearth of nectar at this time. This condition brings on the normal swarming season, and great care is necessary to bring about a better distribution of the bees to prevent crowding the brood nest.

"If to this condition there is added any factor which in any way interferes with the young bees leaving the brood nest to take up work in the supers, the conjestion of bees within the brood nest is increased, since this condition causes field bees to remain within the hives when they should be at work in the fields. The giving of super room of such character and in such a manner that the increasing number of hive workers may be enticed from the brood nest and given work to do in the supers is of the greatest importance in the prevention of swarming.

"If anything causes the field bees to stay in the hive during the day, the congestion and discomfort are greatly increased and these idle field bees may become a serious factor in increasing the tendency to swarm. In nature when a swarm issues, the overcrowding of the brood nest is largely relieved, both within the swarm and within the parent colony.

"Some important swarm-preventive measures, therefore, are:

"Careful selection of stock in breeding.

"The use of brood chambers large enough during the spring brood-rearing period to hold the maximum amount of brood without crowding.

"The use of good worker combs in the brood chamber to prevent a reduction of the available brood-rearing space.

"The arrangement of the brood combs to avoid barriers in the way of a free expansion of the brood nest during the spring.

"Providing extra space for the bees within the brood chamber by wider spacing of combs and a deep space below the frames.

"The use of large entrances during the swarming season, especially when the weather is hot, and in some cases additional openings for ventilation.

"Protection of the hives from the direct rays of the sun by the use of shade boards or double covers.

"Painting the hives white, especially the cover, if a shade board is not used.

"Management to prevent conditions favorable to the building of barriers of sealed honey around the brood nest, or the breaking up of barriers of this kind if they already exist.

(Continued on page 377)

Live and Learn

By Propolis Pete

Lots of times when I sit down to write these things, I get to gassing about something that is current now. I forget that by the time it gets into print, it's too late for this year. I had one half done on spring feeding, continued, and then remembered that swarming would be a better topic.

What conditions will be like when you read this, I don't know. By the law of averages, I should keep my big mouth shut, instead of bragging that I have the swarming problem licked. This year may be the year. But here goes, anyway.

When I started to keep bees, I was in hot water all the time. I couldn't do what the books said, because I couldn't adjust my job to the timing for the standard manipulations. So, I'd make some manipulation according to the rules, and trust to luck. I had plenty of swarming. Nothing that I did seemed to turn out the way it should, and work. I was constantly wondering how in the world anybody could keep four or five hundred colonies, when it took me at least half an hour to go through the prescribed motions. At that rate, it would take ten days of constant labor, 25 hours a day, to go through 500 colonies.

I must have found some short cuts, because now it takes only about five minutes to see all that I need to see. I'll bet that I see more in that five minutes than I used to see in half an hour. The first thing that I learned is that you don't have to look at every cell in every frame in every hive body, every time you look. I found that you don't have to search out the queen every time you took the cover off.

Bees are not going to swarm without first building queen cells. That isn't 100 percent true, only 99 percent. So, if you don't see queen cells, don't worry about swarming. Sometimes they fool you by building cells high up on the combs, but usually they build them along the lower edges of the top brood body. If you don't see them there, you can be fairly certain that they are satisfied where they are. If you do see them, then you can do something about it. I usually just change places with a weak colony. If there are no colonies weak enough, I simply make a divide, and then unite them back again when the mood has passed. That is, if I don't want to increase my colonies.

I remember one year when every time I came out of the house there was a swarm in the air. That sure was a coo-coo year. I just simply couldn't get organized. I tried cutting cells. I tried demareeing, I tried dividing. Still they came. The coo-coo part of it was that at least half of them came out, flew around and then went back home again. Sometimes they would cluster so high up in a tree that I couldn't reach them, and then came home again next morning. First prize that year went to an enormous big swarm that hung ten feet below heaven for three days and then came down and tried to take possession of a one-frame observation hive. The rush hour in the New York subway wasn't even a quorum in that gathering.

Speaking of high swarms; my place here is in what used to be a fairly dense thicket of locust, oak, and wild cherry. The undergrowth forced the trees to grow straight up, consequently some of the trees were 50 or 60 feet high, even though they were only six inches in diameter. Even though the underbrush has been cleaned out, and the trees thinned out to make room to move around, the height is still there.

I have several ways of getting down swarms to where I can reach them. First, for big limbs, I have a pruning saw on a sectional pole that can go up 30 feet. To go higher, it wobbles too much. I also have a clipper that fits on the same sections, and works with a rope. But did you ever try to hook such a contraption over a twig? Talk about trying to put an oyster in a piggy bank. I set a hive on the ground near where I think the cluster will land, and then cut the branch or twig. I have to move fast because the cluster explodes like a hand grenade when it hits the ground. Unless I get the hive over the mess before it gets in the air again, my work is all in vain.

I must confess, at this point, that my usual procedure is just to waft a gentle kiss goodbye to the swarm.

(Continued on page 375)

Second Glances

C.M. Isaacson

South Africa has many advantages for beekeeping (page 265) — not the least being the complete absence of diseases. With this in mind, it is easier to understand the reluctance to import bees. Otherwise, I read with some surprise several statements — that swarming rarely occurs, and that little improvement was desired of the existing South African strain of bees — being taught, as I have been, that there is always room for improvement in our human efforts. Of course, when one considers some of the enormous crops reported from this region, one can hardly blame a feeling of satisfaction — although of course Mr. Farnden does say a much smaller average is usual. All in all, though there are naturally handicaps of sorts, South Africa seems a favorable place for beekeeping.

"The tuition comes mighty high" might be a consensus of Roy Giebel's experiences with bees his first year. But the rest of the old saying is also true—"experience IS a good teacher". The things he learned **not** to do are imprinted far more surely than they could ever have been from reading alone. We wish you the best of success for your next season, Mr. Giebel — and admire your spirit in not only keeping on, but doing so on an increased scale. You deserve a bumper year!

Doub'e brood chamber comb honey production as outlined by Editor Deyell should be of real benefit to those who would like to produce a fair amount of comb honey but lack the time necessary for the greater manipulation needed for other methods (page 272). The point he mentions — that if the swarming desire can be controlled during the first several weeks of the flow, the big danger is over, is surely true (for extracted honey production also). Once a colony gets wholeheartedly into gathering a crop they more or less forget swarming. Reversing brood chambers should help — also putting on several supers at once, and using only very populous colonies (it is your "medium strength" units, especially if the queen is below par, that really cause the beekeeper the most trouble).

A different form of "swarm control" is told of by A. V. Thomson (page 276). He believes in making use of a swarm, however small, and mentions that decoy hives will often attract a stray swarm, especially if the combs are dark. And incidentally, his mention of making a beekeeper out of his little friend shows **he** is a real beekeeper — for such a one always likes to see another sharing the thrill and pleasure (as well as profit) of his vocation. More power to you, Mr. Thomson.

There IS a fascination always in a swarm picture, and those on pages 278 and 279 are very clear ones. One can hardly leave a swarm alone at any time — I have hived some so late in the fall I knew it to be of no use. Early ones, of course, can be of considerable value.

Beekeeping by rule can be fine if we "fit the punishment to the crime" — vary our rules to meet the changing conditions of each year. There are basic essentials to be kept always in mind; the rest is adaptability (page 282). And regarding that let-up in brood rearing that Editor Deyell mentions (page 286) is it not generally true that queens seem to take a "rest" after that first fairly heavy brood rearing in the spring? I have generally found it so.

Stimulative feeding can boost brood rearing considerably at times. A strong colony with a good queen, however, will usually build up fast enough anyway if they have an abundance of stores so I don't practice feeding unless stores are short. Propolis Pete's experiment will be an interesting one, though.

Minor nectar and pollen sources ARE very important (page 288). This spring has furnished an excellent example here. The willow flow has been very good and colonies average in strength far above other years at the same time. As the editorial says, syrup and pollen substitutes may have to be fed at times, but results from them will never quite equal a natural honey flow. Bees seem to have a vitality and vigor then, obtainable in no other way.

The industry has been done a disservice by apologies for granulated honey and insistence on clearer and more syrup-like honeys. We should not attempt to compete with products that are not the equal of ours, but sell ours for what it is — the best natural sweet. We **are** "partly to blame" (page 290).

A Talk to Beginners

M. J. Deyell

Tame Bees

Some people seem to think that honey bees that live in trees or sidings of buildings are wild bees and that bees that live in movable-frame hives are tame bees. In my opinion and in that of some others who are supposed to know, the bees that live in trees are just as tame as those that live in hives or vice versa. Both kinds react to the same stimuli.

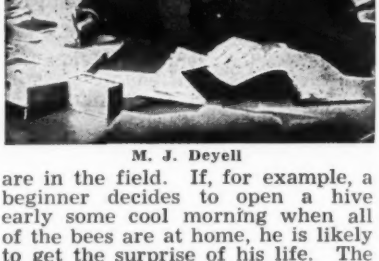
However, there surely is a difference in strains and races of bees. Some years ago we had some Caucasian bees which were unusually docile and easy to handle. I could pound my fist on the top of the frames, after opening the hive, and not a bee would sting.

I have seen some cross colonies in my time but a hybrid colony in one of my yards in northern Michigan was the worst. The bees were so cross that I had to slip up behind the hive and ease a super on the top of the pile, then run. Smoking the bees in that hive did no good but infuriated them. But that colony put up more honey than any other in the yard.

Such bees are a nuisance and should not be put up with for very long. The beekeeper from whom I bought the apiary admitted that some of the colonies were rather savage, but said he didn't care how cross they were so long as they brought in the "juice".

Now I believe it is perfectly possible to have bees that are reasonably gentle to handle and at the same time superior in honey-gathering qualities. As time goes on and our country becomes more thickly populated, it is going to be absolutely necessary to have bees that are gentle to handle, especially if kept in back lots of towns or in suburban places. People are not going to put up with stinging bees.

In many instances, the owner of the bees is responsible for neighbors getting stung. He may not use good judgment in selecting the proper time of day to open the hives to manipulate the colonies. Obviously, hives should be examined, preferably during the middle of the day when bees are working well and when a large percentage of them



M. J. Deyell

are in the field. If, for example, a beginner decides to open a hive early some cool morning when all of the bees are at home, he is likely to get the surprise of his life. The bees will not stand for being molested unduly so early in the day when they are all at home.

The Gentlest Colony I know

I help a back-lot beekeeper in Medina to care for his one colony of bees. It is unnecessary to use a smoker or veil in handling these bees. Last season, this colony put up a good crop of honey, so the bees are industrious as well as gentle. A few evenings ago, I removed the cover from this hive of bees to put on a super, without using smoke and without a bee veil. The colony was so populous that the bees simply boiled out over the top bars of the frames when the cover was removed. I took out a frame to see how it was filled, and did not receive a sting.

A few days ago I was in one of my own yards in the country where there are one or two cross colonies. However, I intend to get rid of those queens and introduce others from a gentler strain, I hope. Some of those cross bees followed me to my car and even after I was seated and ready to start away, a bee flew in through the window and stung me on the nose. Was I disgusted!

Our Scale Hive

There is a scale hive just west of my office where I can look out through the door and see the bees flying. This hive serves as a sort

of barometer of what bees are doing in this locality. During the past nine days, this hive has gained 11 pounds. At present the weather is rather cool. However, yesterday, May 7, the hive gained one pound even though the temperature hovered around 60 degrees F. during most of the day. It is a little difficult for me to understand how and why bees collect so much pollen, also some nectar when the air is so cool. There is an abundance of dandelion in bloom at the present time. Bees were rolling in the pollen nearly all day. I thought they looked rather full as they entered the hive, so I caught one which did not have pollen, and held it up to the sun to examine the abdomen. When I squeezed the abdomen a large drop of nectar came out of the bee's mouth. I know it was nectar because I tasted it. One has to be careful when squeezing nectar out of a bee, to avoid hurting it or getting stung. There is a certain technique to be followed. Each person who does this has perhaps developed his own method. I simply hold the bee by the wings with the thumb and first finger of my left hand, then press the abdomen of the bee with the finger-nail of the right hand, being careful to avoid being stung. This causes the bee to regurgitate the nectar from its honey sac.

Very Populous Colonies

Recently I have checked through a number of colonies. Some of them have brood in 12 combs. This is somewhat unusual for the first week in May. Such colonies, if they can be kept intact until the honey flow begins early in June, should be ready to take full advantage of the flow.

In some instances, colonies that reach their peak of strength before the major honey flow starts, lose their morale and do not store as much surplus as those that reach their peak at the time the honey flow begins, or perhaps a little after. Personally, I like to see colonies reach their peak a few days after the major flow begins. They are then on the up-grade and may not get the swarming fever as quickly as those that reach their peak of strength before the main honey flow starts. To have colonies reach this peak at the proper time is a problem in apiary management that is not easily solved because the main flow may not start at the same time every year. Colonies that are very populous and start queen cells should be divided and the queenless divisions given young laying queens. The divisions may be united later when the main flow starts retaining the young queens and disposing of old queens.

Our scale hive which tells what bees are doing throughout the season.

Abundance of Pollen in the Spring

There appears to be more pollen than usual this year. However, bees do require a large amount of pollen for brood rearing. It has been said on good authority that one pound of pollen is required to produce one pound of bees.

Have you ever examined the combs of a brood chamber during a good pollen flow and perhaps wondered what the bees were going to do with all of it, then, following a few days of rain, you visited those same colonies and found very little

pollen in the combs? It is amazing how quickly a seemingly abnormal amount of pollen will disappear during a cool, rainy spell. If the bees did not have this pollen stored ahead, brood rearing would be curtailed.

Getting Excited about Swarming

Sometimes during the spring months when the fruit bloom and dandelion honey flow is on, strong colonies will start queen cells. I recall one spring, some years ago, when we had an unusual warm spell the last week in April. Bees began building queen cells. At first we noticed eggs in queen cell cups, then, later on, queen cells being developed. We rushed supers onto the hives to provide more comb space. In a few days we had cold weather — in fact, a snowstorm. This helped check swarming. As a rule, Mother Nature takes care of the swarming problem during the spring months. However, once in a while, swarms will issue even during April or early May in this area. It pays to keep strong colonies properly supered a little in advance of the actual need for supers.

Supering in Advance

Obviously, we should not put on too many supers at one time, especially early in the season because this makes it more difficult for bees to maintain the proper hive temperature during cool weather. Some put on an extra super or supers above the inner cover with the center block removed. This makes it possible to adjust the supers by putting the inner cover above the pile when the main flow actually begins.

Putting on all Supers at Once

We talked with a beekeeper in western Ohio, who one season had a yard devoted to section comb honey production. He was very busy and short of help so he put four or five comb honey section supers on each hive in a moderate-sized apiary. This was done as the main flow was about to begin. He did not see the yard again for a month. When he went back he found practically every super well filled with honey. He may have lost some swarms but he did not expend any time or labor on the yard during that month of his absence. The colonies had an abundance of comb space, the honey flow was rapid and of considerable duration, making conditions favorable for putting on all supers at one time.

The two-queen colony near the Gleanings' office.

We talked with another beekeeper who lives in Ohio and operates some bees in northern Michigan. Last year he put on all of his supers a little before the main honey flow. He produced extracted honey, and claims that his crop was larger than those secured by other beekeepers in that area.

While we are not generally recommending this practice, we are simply saying that it may work out to good advantage where labor is scarce and time necessary for frequent hive manipulation is not available.

I would like to call attention once more to what Dr. W. E. Dunham, of Ohio State University, said recently in a bee meeting in Chicago, about the advisibility of putting supers on early. He thinks that bees that are given supers in advance of the honey flow learn to go up into the combs of the supers, then, after they have formed this habit and the honey actually does start, they will occupy the supers and store honey in the combs more readily than if supers were given after the flow begins, or is about to begin. This sounds sensible. Supering a little in advance would seem to be a swarm control measure.

Keeping Colony Records

For years I have used a small wooden tab about 5 inches long, 3 inches wide, and ⅛ inch thick, painted white with a small hole in one end, for the purpose of hanging the record tab on a nail driven in the front of the hive directly below the hive cover.

At the top of the record tab I put "1952". When I check through a colony, I record the number of frames of brood. This gives me a good idea of how populous the colony is. When a colony has brood

in six combs, I mark down in pencil, "Six FB", followed by the date or day of the month. If I put in a new queen, I mark the name of the breeder who furnished the queen, and the date. This wooden block contains a record for the entire season. It can then be painted and used over again the following season.

I also use an ordinary brick on top of each hive. This serves two purposes, — first, it holds the telescope cover on, in case of a wind storm, second, I can use the brick as a marker for colonies that need supers. For example, if the colony is normal in every way, the brick is put on flatwise in the center of the cover; if there is something wrong with the colony, I place the brick crosswise.

Within the past few years I have referred to the two-queen colony we have near the Gleanings office. We now have a two-queen hive, referred to by Mr. Sechrist of California. Each end compartment has seven combs. The middle compartment has nine combs. Each end compartment is separated from the middle one by a partial wooden division board and queen excluder zinc. During the winter, a one inch hole in the upper front portion of each brood compartment is left open. During the honey flow, these holes are closed and the entrance to the middle compartment is opened. Supers are placed over the middle compartment as needed.

This past winter, the two colonies in this hive wintered successfully. They appeared to have an ample amount of honey. It is interesting to find how the two lots of bees will intermingle during the summer when the main honey flow is on.

This coming season we hope to keep a record as to how much more honey, if any, this two-queen colony produces than the two single queen colonies in the same yard near by.

Watch Stores

Beginners, and in fact experienced beekeepers, should keep an eye on all colonies to see that they have ample stores especially during early June. Bees can starve quickly during rainy weather. One sign of starvation is to find young larvae carried out of the combs and deposited on the alighting boards of the hives. One of the first signs of starvation is to see drone brood carried out but when you find worker brood at the hive entrance, chances are that the colony is too far gone to be of any value.

Swarm Control Manipulations

By E. S. Miller, Valparaiso, Indiana

Strong colonies, about the time of fruit bloom, or soon thereafter, often make preparations for swarming. Swarming is more apt to occur with blacks or hybrids than with a good strain of Italians. Picking out queens cells is a waste of time and transposing the sections of a two-story brood chamber is not very effective as a means of swarm control.

A better method and one that nearly always works is this: Replace the second story with a super of drawn combs or full sheets of foundation. Above this place a queen excluder and above the excluder add what previously was the second story. Be sure the queen is below. This work should be done before queen cells are started in the colony.

A still better scheme is to start nuclei with brood and adhering bees taken from the stronger colonies, giving each nucleus a laying queen. The nuclei may be placed each on a separate stand, or above a weaker colony if a wire screen is used, to prevent the bees deserting to the colony below. The wire is to be removed after the new queen becomes well established, substituting for it a second queen excluder. There should be at least one super between the two queens. The nucleus and the parent colony may be re-united at the beginning of the clover flow, if desired, after disposing of the old queen.

Editorials

Swarms in Dwelling Houses Stray swarms that leave apiaries naturally try to find homes. If they do not find hollow trees they are likely to enter cavities between the sidings of buildings. In some instances, enormous swarms have occupied such cavities in dwelling houses for some years. The owners of the houses would like to get rid of the bees but do not know exactly how to go about it.

We receive calls regarding swarms in buildings. In some instances, the owner of the building expects us to answer calls immediately and do something about removing the swarm. Not being specially equipped for such work, we usually refer such inquiries to beekeepers or beekeepers' associations in counties where such calls originate.

There are a few beekeepers who specialize on removing swarms from sidings of buildings, making a charge for their services. It would appear that more beekeepers might engage in this type of work. They would be doing the owners of dwelling houses a service and at the same time contributing to the welfare of our industry, because swarms of bees are worth much more in modern movable-frame hives than they are in sidings of buildings.

It would not be surprising if this should be a heavy swarming year, because reports from over the country indicate that colonies of bees are in excellent condition and prospects for a honey flow are quite encouraging.

Obviously, owners of bees should provide ample comb space, which means putting on supers, to give their colonies a chance to expand and thus control swarming.

In some instances, small apiaries are neglected and consequently during the swarming season nearly all of the hives send out swarms which help to increase the number of bees in dwelling houses and bee trees.

It would be interesting to know just how many, or approximately how many swarms there are in bee trees, sidings of buildings, and other such places in any state or county. Such bees are rendering some service, from the standpoint of pollinating fruit, vegetables, and legumes. If it were not for these stray swarms the pollinating problem would be more acute than it is at present.

It would seem that beekeepers should have a few extra hives on hand for hiving swarms wherever and whenever found. A large swarm put into a hive at the beginning of the main honey flow is likely to store a good crop of honey.

* * * * *

An Opportunity to Increase Honey Sales According to information contained in a letter dated May 5, 1952, from The American Beekeepers' Federation to presidents and secretaries of state beekeepers' associations and state apiary inspectors, the Department of Agriculture is planning a promotional program for honey. This is the result of a request by the American Beekeepers' Federation and is to be handled by the Food Trade Division of Food Distribution Branch of PMA.

The program is being directed by G. E. Freeman who is in charge of the Food Trade Division in PMA. There are five food distribution branches, in Chicago, New York, Dallas, Atlanta, and San Francisco. This program, with 40 or 50 government employees working on honey promotion, will handle contacts up to a national level.

This effort is to reach its peak during National Honey Week in October. National Honey Week was instigated by the American Honey Institute some years ago and has been featured each year in creating special emphasis on honey sales.

The regional and state personnel will contact state associations of wholesale and retail grocers, hotel and restaurant organizations, and groups engaged in the marketing and preparation of foods.

It's hoped that all states and county bee associations will become more active in promoting honey sales. Suitable printed matter, such as leaflets containing honey recipes, window cards, etc., may be obtained from the American Honey Institute, Madison, Wisconsin, at a very nominal cost.

It would appear that cooperating with the government agencies that are now functioning is one way to increase honey consumption. At present the consumption of honey

in the United States, about 1½ pounds per capita, is much lower than it should be. Canada has increased its per capita consumption of honey within the past few years. We in this country can do the same if we will concentrate on promoting sales. Let us hope that this effort may result in a higher per capita consumption of honey throughout the United States.

* * * * *

So Seemingly Simple, Yet So Difficult The successful beekeeper with years of experience may at times be at a loss to understand why the average beginner beekeeper fails to grasp the fundamentals that govern success in beekeeping. Oftentimes the banker, accountant, or professional man who is supposed to possess a high I. Q. is just as "dumb" at learning to handle bees as the ditch digger or those who have not had the advantages of a higher education.

Some say that beekeepers are born and not made. There may be some truth to this statement. During the past 25 years we have had a rather wide experience taking on and training young men from this and other countries, in beekeeping. Some "catch on" quickly. Others are slow to learn and in some instances are hopeless.

One difficulty with some professionals and business men who keep bees as a hobby appears to be that they think beekeeping is so simple that they do not have to take time to learn it. They get some bees, put on some supers—perhaps after the main flow is almost over—and hope to secure some surplus honey.

Within the week we were called out of town to hive a swarm on the estate of a well-to-do business man who has a few hives of bees and is away from home much of the time. We found one of his hives very populous, in a congested condition, with a section comb honey super on over a queen excluder that was upside down.

Our industry is sadly in need of more good beekeepers. What can and should be done to improve the beekeeping technique of beginners who may some day become successful commercial beekeepers, who will take the places of the older men who pass on, or others who are incapable of carrying on?

In the first place those of us who try to guide or instruct beginners should endeavor to be more explicit in our instructions, and use more pictures or drawings to illustrate various steps in hive manipulations.

In the second place, state and county beekeepers' associations, when setting up programs, should keep in mind the needs of beginner beekeepers.

To some, beekeeping may seem to be easy or simple, but for most of us it is rather difficult to actually secure the maximum crop. All of us have much to learn about handling bees successfully.

* * * * *

Western States Need More Honey Bees While attending the pollination conference at Tucson, Arizona, in October, 1950, speakers appearing on the program stressed the importance of honey bees in the production of alfalfa-seed throughout the West.

Some recommended four or five colonies per acre for a seed yield approaching the maximum. Dr. F. E. Todd of Tucson said that the honey bee population of the eleven western states was inadequate to meet the pollination needs.

The following appearing under date of May 2, 1952, from U. S. Dept. of Agriculture, Agricultural Research Administration, Washington, D. C., confirms Dr. Todd's statement at that time:

SHORTAGE OF SEED-ALFALFA POLLINATORS CALLS FOR COMMUNITY ACTION

The growing problem of supplying enough honey bees to pollinate the seed-alfalfa fields of the West can be partially offset by community action, in the opinion of entomologists of the U. S. Department of Agriculture. Currently, potentially greater yields for seed growers in 11 western States which have more than 300,000 acres planted to alfalfa, are threatened because there are not enough honey bee colonies to go around. Furthermore, the colonies that are available are not evenly distributed over the area.

Entomologists of the USDA's Bureau of Entomology and Plant Quarantine point out that a farmer growing alfalfa seed for profit cannot depend on the fluctuating wild bee population in the neighborhood for pollination. He must have a big enough supply of honey bee colonies at hand when his crop is in bloom to realize a maximum seed set.

Only through the development of more bee colonies or the more efficient use of those now available, can the pollination problem be eased, they say. There is little chance of more bees soon becoming available, because many beekeepers are finding their profits (primarily from honey sales) failing to keep pace with rising business expenses, say the entomologists. Therefore, cooperative use of bee colonies by growers appear to offer both growers and beekeepers the greatest opportunities.

Entomologists believe that growers acting together in concentrated seed growing areas can offer incentives that will encourage beekeepers to permanently establish colonies in the area, and that will attract keepers of migratory colonies during critical pollination periods.

Such community action can arrange for fair distribution of the bees throughout the area, and can establish bee colony sites that are easy to reach by the beekeepers and offer least interference with other farm work.

This type of grower cooperation would result in better seed set in the community, the entomologists say, and in turn would guarantee greater profits for beekeepers, based on the amount of seed harvested.

Cooperating growers can offer area-wide protection to the honey bee colonies by arranging community insecticide dusting and spraying schedules that least conflict with bee activities.

Finally, in areas where bee numbers are particularly limited, cooperating growers can stagger alfalfa cuttings left for seed. By proportioning the number of acres of seed to be made after the first and second cuttings, they can extend the pollinating services of a few bee colonies to reach a maximum number of plantings.

* * * * *

More than One Taster Needed It is a well-known fact that sometimes there are disagreements when honey is shipped, the buyer claiming the flavor is not as good as that shipped at some prior time. To be on the safe side, more than one should do the tasting and the tests should be at different times. According to Farm Research, a quarterly published by the New York State Agricultural Experiment Station at Geneva, and the Cornell University Agricultural Experiment Station at Ithaca, the measurement of flavor in food is so complex that it is unsafe to rely on the judgment of only one. Three distinct senses, taste, smell, and feel are often involved. One's reaction to the same food is not always the same from time to time, so it is really not safe to rely on one or even two persons for critical judgment on the flavor of a food.

* * * * *

What Will the Harvest Be? Those of us who have followed beekeeping for some years can recall good and poor honey seasons. Beekeeping like most other kinds of business is largely a game of chance. Even though prospects for a crop may appear promising, things can and do happen occasionally to reduce the crop down to an unprofitable level.

The efficient beekeeper who understands the principles involved in securing the maximum crop, aims to have his bees in good beekeeping locations. He also has populous colonies at the time the major honey flow is supposed to begin and supplies ample comb space for the bees to harvest the crop. This means putting on supers in ample time to avoid congestion within the hives.

If favorable weather conditions prevail he is likely to secure a good crop. If unfavorable weather occurs during the time the crop is supposed to be gathered he is likely to experience a partial or total crop failure, which is indeed discouraging.

It would seem that the commercial beekeeper should have a financial backlog, or what is sometimes called a sinking fund, to tide him over lean honey years. It is one thing to talk about this and still another thing to actually do it, but it should be done.

Sometimes a honey crop creeps up on us. We may not be expecting a big crop but we get one. At other times when crop prospects are favorable, we may not secure as large a crop as we expected. There are yet many things to learn about the why, when, and where of nectar secretion.

In 1929 when we had an abundance of alsike and white Dutch clover around Medina, the bloom came on rather early. Clover appeared to be in full bloom the first week in June but the bees wouldn't look at it. Some colonies had used up most of their stores and were on the verge of starvation. A few of the clover blossoms were beginning to fade and we wondered if bees would get any nectar. On June 11, in the afternoon, the bees began suddenly to roll in the nectar. We were kept busy for a time putting supers on over 1000 colonies. That was one of the best honey years we have had in Ohio.

The old saying, "Keep the platter right side up," applies to beekeeping. If our colonies are ready for the flow when it comes, we will get a crop. If they are not ready, we fail to secure the maximum crop and we have no one to blame but ourselves.

In view of the present scarcity of good table grade honey in the U. S., a big honey crop is needed. Prospects in most areas are promising for a crop, so far as flora and moisture are concerned. Let us hope the weather man may be kind to beekeepers and that a bumper crop may be harvested.

From North, East, West, and South

SOUTHERN CALIFORNIA, May 3

Weather: April had several good showers of rain which have left the ground in excellent condition for plant growth. Most of Southern California has had about twice the average seasonal rainfall and four or five times the precipitation for the past seven years. Those seven years were unusually dry and caused the underground water level to drop several feet. If we could have two or three more wet seasons, water conditions would become normal again after the serious shortage.

Condition of Plants: Perhaps the plants have never been in better condition than they are this season. Everything seems to show the results of the rains which have come quite regularly ever since last November. The black and white sages are looking exceptionally thrifty. The orange trees are loaded with white blossoms and there seems to be plenty of nectar in them. So the little bees are really kept busy gathering honey. Weather conditions have been very good and if the warm sunny days continue, a crop of honey way above the average should be harvested.

Condition of Bees: Most of the colonies are in very excellent condition and strong enough to gather a good crop of honey. In a few cases they were too strong just before the orange flow came on and consequently they swarmed badly. That left the colonies in a weakened condition when the flow of nectar began. The beekeepers who had that experience won't make as good a crop of orange honey as they had expected.

Market: With practically all of the honey out of the hands of the producers and bottlers, prospects look encouraging for a strong market as soon as the new crop of honey comes on. The producers are in as optimistic a frame of mind as we have ever seen them as they are expecting a bumper crop and good prices for their honey.

Miscellaneous: Wild flowers of all kinds are gorgeous in several localities over southern California. The Coachella Valley in Riverside County and the Mojave Desert in San Bernardino County are two of the sections where thousands of people have gone to see them. But it doesn't make much difference where one drives into the country, there are beautiful fields of flowers everywhere. Of course, the bountiful precipitation is the cause of this wonderful display.

There has been more complaint this year than usual of swarms of bees getting into people's chimneys and houses. It makes a little bad feeling toward the beekeepers. If folks only knew how the apiarist hates to lose his bees, perhaps they would be much more charitable.

Easterners who are not familiar with the orange blossoms of California would certainly enjoy the delightful aroma of these beautiful white flowers. In the evening especially, the whole atmosphere is filled with the very pleasing scent of the orange blossoms.—L. L. Andrews, Corona, California.

NORTHERN CALIFORNIA, May 1

Weather: It is bright and warm today but has been somewhat unsettled for most of April, so much so that the colonies in this area have consumed about 30 or more pounds of honey more than they were able to gather. Only 1.04 inches of rain fell in this immediate portion of the Sacramento Valley, with heavier rains and considerable snow to the north and in the mountains. The total rainfall so far is 20.35 inches, or 4.34 inches above the average for Davis. Last month the prospects for floods during May and June were ominous, but the runoff since has been gradual, and the threat of heavy damage has lessened somewhat, especially for the Sacramento Valley and north. By the time this is printed, we will know either what has happened or what is in store for the San Joaquin Valley and some portions of the Central Valley in the way of floods.

Condition of Colonies: Colonies

have not been able to make the most of the available nectar and pollen plants this spring because of unfavorable weather. As a result, beekeepers have had to feed those that were not left sufficient to carry them through and some have starved. The bees built up well, and there were plenty of bees for packages. Several hundred packages were shaken early to make colonies for pollination purposes in southern California later in the summer. Swarming has not been a factor where bees were given plenty of room. One beekeeper complained of excessive swarming, but he admitted wintering his colonies in one-story hives and of not having enough supers for all colonies. Bees will winter well in one-story hives, but they will require the second story during the early part of fruit bloom, plus additional stores if the weather is unfavorable for bee flight. The same colony will have to receive a third story, or be divided or have surplus bees shaken out for packages during the last of April in this section if it is to be kept from swarming. Our main honey flow from alfalfa and star thistle does not begin until late June and early July, which means that all of the bees reared during March and April and many in May are just so much lost effort unless they are used to make surplus, or for packages, or to gather sufficient honey to carry the colony through the six weeks' dearth period of May and early June.

Some beekeepers move their colonies to the citrus region to make the bees productive during this period, but this territory is limited. Other colonies are moved to the mountains. With favorable weather, colonies in northern California will support themselves in many areas, but it is always good insurance to have a full super of honey for each colony at the close of the summer flow.

Some beekeepers have reported a greater incidence of European foulbrood, although there have been no cases in this area. One sample of diseased brood resembling parafoulbrood was received from the Vacaville area, where European foulbrood is also fairly prevalent. This is the fourth case of parafoulbrood that has come to my attention during the last four years. In this sample, some of the decaying larvae were coal black in color and quite odoriferous, at least one-third of the diseased cells were sealed, and many scales covered the full length of the cell. We will appreciate receiving additional material from beekeepers or inspectors who are in doubt about the nature or cause of dead brood. This disease was not transmitted to an Iowa AFB resistant inbred experimental colony in one of our apiaries. Last year a similar diseased comb was cleaned up, without causing additional infection, when placed in an Italian colony, and in two previous cases the disease disappeared soon after the beginning of the nectar flow in summer from the originally infected colonies.

Condition of the Honey Market: Several California handlers have moved large quantities of honey during the past few months, practically depleting the stocks of the beekeeper and greatly reducing their own inventories. Much of this honey has been exported to other states and to foreign countries. Two or three requests for assistance on the question of determining the presence and role of diastase in honey have been received from exporters, some foreign agents insisting that diastase in honey is an essential ingredient and that honey without diastase has been injured by heating. A majority of California honey that has been exported has not been heated and yet some has been turned down because of a shortage or lack of diastase. It was shown years ago that the diastase content of honey is due, largely, to included pollen grains, but in view of this renewed criticism from abroad, it will be necessary to reconsider the proposition from all angles, the biotic as well as the chemical and physical.

Miscellaneous: A large alfalfa seed grower has raised the question as to the actual number of colonies needed to produce or to influence the production of an economic amount of seed and suggests that the beekeeping industry has been over-emphasizing the importance of bees. He calls attention to at least 14 factors, the neglect of any one of which (including pollination) will affect the production of seed. He recognizes the fact that the more colonies placed per acre, the lower will be the yield in honey. His experience in an area where he grows several hundred acres of alfalfa for

seed, is that one colony per acre will give him an economic return of seed in years favorable to seed production. (Most areas profit more by three colonies per acre.) This grower does not wish to share his "know how" in producing seed with the beekeeper, through rentals, and suggests that seed growers buy and operate their own colonies for pollination purposes. Some beekeepers, on the other hand, are seeing greater profits from seed than from beekeeping and are going into seed production as their main source of income. This is still a land of opportunity. Some of our larger seed growers use several thousand colonies of bees for pollination purposes and at a cost of one cent per pound of seed per colony, the total sum involved looks like a very considerable item to them.

While 14 factors may influence seed production, **without adequate cross-pollination, the other 13 factors will not produce an economic amount of seed.**

Colonies have to be maintained 12 months of the year and the cost of operation will run from $5.00 to $7.00 per colony, on the average. The difficulty of getting experienced help is the limiting factor.—J. E. Eckert, University of California, Davis, California.

TEXAS, May 8

Weather: April was relatively cool with considerable cloudiness. Rainfall was above normal over most portions of the State, highly beneficial to plant life and reserve soil moisture is beginning to build up. However, the underground water supply continues to decline as indicated by continued lowering of the water-table and running streams remain below normal levels. The strata from which most of our underground water emanates are exposed in a region where drouth has prevailed for many months. Recent rains have extended farther inland but much of west and extreme south Texas remain dry.

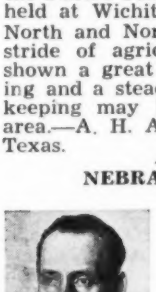
Bees and Plants: The profusion of wild flowers in great variety and color adorning the roadsides over a large area of Texas would lead passing motorists to suppose that the area is a beekeeping paradise. Unfortunately, relatively few species of these wild flowers are of value to bees. Some loss of bees from starvation occured in early April when some wild flowers bloomed in the vicinity. In most sections, bees built up well with some colonies reaching the peak of population by the middle of April. Swarming is reported from most sections. Locally bees obtained large supplies of pollen from oaks, willows, and several species of ground flowers. Yaupon bloomed in profusion providing a fair nectar flow but little surplus was obtained. Cool and cloudy weather kept the bees in the hives when otherwise they might have been foraging. The resulting congestion of bees in the brood nests added materially to the swarming problem. At present there is a light flow from native persimmon and rattan. In spite of frost injury in other sections, a flow from mesquite is reported from south Texas, also some surplus from guajillo in the eastern portion of its range. In central Texas, the first heavy gathering of pollen came almost exclusively from bluebonnets. In the vetch area, abundant rainfall and cool weather delayed the early bloom but aided growth of the vines with the main bloom coming on at the usual time. Reports indicate that a good vetch flow is now in progress. Crimson clover has attained considerable prominence in east Texas as both field and pasture crop. This clover is to an extent self-fertile but seed production is materially aided by bees visiting the blooms. Although bees visit the blooms freely, most beekeepers report only scant yield of honey from this clover.

Market: Producers' supply of honey is now practically exhausted. Movement of honey in the retail market is particularly slow at this time. Prices remain unchanged. Announcement of government price support for 1952 at 70 percent parity is received with considerable interest, especially the authorization of a loan on producers' stock without obligation of sale. Further clarification of the program, no doubt, is forthcoming.

Miscellaneous: Queen breeders report a good demand for queen bees with early spring shipments

going out in considerable volume and in some instances the demand exceeded the supply. Package bees also have been in better demand than was anticipated. Most large shipments are made by motor truck. Cool and generally adverse weather hindered operations to some extent. A short course in beekeeping for the Future Farmers of America was held at Wichita Falls on April 25. North and Northwest Texas in the stride of agricultural progress has shown a great interest in beekeeping and a steady expansion in beekeeping may be expected in that area.—A. H. Alex, College Station, Texas.

NEBRASKA, May 6



Weather: Winter months brought no unusual weather, one extreme or the other. However, we had our most severe blizzard of the year in March at which time we were snowbound. April proved to be the wettest on record. May 4 brought 93 degree weather, so we have had plenty of freakish variety this spring.

Condition of Bees: Winter loss was comparatively light. Where sufficient stores were left on last fall, bees came through in good condition. Due to cold wet weather bees have built up slowly. At the present writing, though, they are doing very well on dandelion and fruit bloom.

Crop Prospects: Everything seems favorable for a good honey crop. There is an abundance of subsoil moisture and grasshopper damage last year was not too extensive. Barring hail and excessively drying winds we should have a good crop.

Honey Market: Prices have advanced, but demand is light. Little honey remains in the hands of the producers. Those who must buy to have a steady supply for regular customers are having difficulty in obtaining additional honey.

Miscellaneous: Floods along the mighty Missouri have inundated thousands of acres of fine farm lands in the eastern part of Nebraska. To date we have not heard of any extensive loss of bees. Honey, however, is being used in relief work among the homeless. Devastation is indescribable

It seems to us that the mention of honey and honey recipes are appearing in magazines and papers of wide circulation, and on national hookups with much more frequency than in past years. This is a step in the right direction, for we need national advertising for our product just as other products are advertised and promoted.—Benj. Nielsen, Aurora, Nebr.

WISCONSIN, May 6

Up to Now: No complaint about the weather in April or the way colonies built up for the coming honey flow. Perhaps by next month we will have something to gripe about — especially if we do not get rain soon to enable the clover to produce nectar. At this time (May 6) it is getting very dry.

At each of our spring district meetings of the State Association, the question was asked, "How did your bees come through the winter, and how are they now?" In spite of a mild winter and practically no losses sustained by expert beekeepers, there were the usual reports of heavy losses, due of course to starvation. We have been putting on an active campaign to prevent such losses by February and March inspection and feeding, and feel that headway is being made. More and more beekeepers are wintering without packing, but with a windbreak, and are beginning to allow enough honey in the right place in the brood chamber so colonies will survive.

After a late spring the very warm spell of the last week in April and early May forced fruit and dandelion bloom two weeks sooner than expected. Colonies were building up fast during that time and we expect trouble from swarming if there is a period of cool wet weather in late May, with strong colonies unable to keep busy.

Beekeepers' Meetings: We liked E. C. Martin's description (page 295, May issue) of what one sees at beekeepers' meetings, especially that—"there is always someone who is anxious to promote bigger and better schemes; someone who is 'agin' all of them; an old timer who always tells how the same thing was

done much better back in 1913". If one watches the interest of beekeepers in programs, there is a definite pattern that is followed and repeated. Some years ago there was great interest in new discoveries in colony management — better wintering, better spring management, swarm control, extracting methods, etc. Then came a flair on marketing, better labels, better packages, advertising, promotion, roadside stands. Those who could make use of such information, usually the larger beekeepers, maintained their interest. The little fellow said, "I don't have any marketing problem because I don't produce enough honey, and I do want to learn how to take care of my bees." Right now the cycle is changing again, and the largest meeting I attended in April was one in which several County Agents notified amateur beekeepers of a meeting at Honey Acres, Menomonee Falls, where we demonstrated installation of package bees and manipulation of colonies. The meeting was held on a Sunday afternoon and 49 autos were parked in Walter Diehnelt's yard.

Honey Bottling: Last July and August we bottled honey while extracting to save labor later when we had less help and less time. We were worried that the honey might granulate before being marketed. We can report that when properly done, honey can be kept in good condition from July to May. This is how we did it. The honey ran from the extractor into a water-jacketed container with baffles and was heated to about 100 degrees. It was then pumped into a large storage tank and strained. After settling, it was drawn off into a heating tank where about 600 pounds were heated at a time to a temperature of 140 to 145 degrees. The honey was then bottled immediately, the caps put on and sealed. The cardboard cartons containing the glass jars were left open and were spread out over the floor to allow the jars to cool quickly. Then the cases were closed and stacked for future sale. We found that if the honey in the heating tank was allowed to cool overnight and then bottled, it granulated within three months.

Crop Prospects: The crop will be good if we have rains enough to keep the clover blooming. It will be poor if there is a drought. Usually some sections of the country have rains while some do not and nationally the crop will probably not be short. We hope the price will be stabilized by the new Government Floor, but it won't be as high as maple syrup for the simple reason that there isn't very much maple syrup and there is plenty of honey.

The price of a food like honey is controlled by these factors: the size of the national crop; the willingness and ability of the consumer to buy; and the price of competing articles.

The size of the national crop and its effect can to some extent be controlled by promotion and advertising. In this respect, we would like to say that we have had the opportunity of watching the work of the **American Honey Institute** in Madison, Wisconsin, and believe that they have a sound, long-range, well-planned promotion program. It is not spectacular and may not meet with the sky-rocketing effect desired by the type of beekeepers described by Mr. Martin as "someone who is anxious to promote bigger and better schemes" but **the Institute is promoting honey week by week, month after month, and year after year. Let's give them more money so they can do a bigger job.**—H. J. Rahmlow, Madison, Wis.

ONTARIO, May 8

Increase per Capita Consumption of Honey: Previous to the 1939-'45 war we here in Ontario did not worry unduly about honey markets. We sold what we could in Canada, and the remainder we exported. The Ontario Honey Producers' Cooperative did a great deal of spade work in opening up the British and Continental market to Canadian Honey. In 1939, just prior to the outbreak of war, Canadian Cooperatives and other groups of beekeepers, as well as individuals, had exported to Britain and Europe, between ten and twelve million pounds of Canadian honey. Since 1939, export to those markets has been negligible.

Foreseeing that Canada would have to consume its own production, the Canadian Beekeepers' Council, the first National beekeepers' organization, was formed in 1940, with one of its declared purposes, the promotion and advertising of honey. With the cooperation of the provincial beekeepers' associations, the Council has done a yeoman service, and our per capita consumption now stands at four pounds. An increase of another pound would take care of any increase in national production for some time to come.

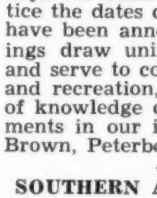
The foregoing paragraph is preliminary to drawing attention to remarks I made in this column a few months ago concerning the boost given honey by National Sports College Association, in recommending honey as a food for athletes, and my remarks last month concerning the Detroit Red Wings of the National Hockey League, who use honey consistently as part of their training diet. The Red Wings, as hoped and expected, won the play-off series in four straight games in a seven-game series against Montreal. Immediately following the series, the Publicity and Advertising Committee of The Ontario Beekeepers' Association met, and in cooperation with the Council, inserted quarter-page advertisements in six large Ontario dailies. These advertisements featured a group picture of the Detroit team and individual cuts of two of the outstanding players, both of whom gave individual testimonials to the value of honey where quick energy is needed. It is difficult to assess the value of these, or any advertisements, in terms of demand for the product, but if it makes our scores of thousands of juvenile and teen age athletes honey-minded, the results will be apparent in greater demand for honey next year and those following.

Conditions: Following a long winter, spring burst upon us with startling suddenness on April 10th, and the weather since has been unseasonably warm for April. Early trees and plants sprang into bloom, and excepting a few cool days the spring like weather continues unabated. Farmers have almost completed seeding, and would like to see some good rains as the surface soil is becoming dry.

We are unpacking our bees and find that they are building up fast under the influence of a light, but steady honey flow. Strong colonies are becoming pollen bound, as dandelions, a prolific source of pollen, are now in full bloom. Next will come fruit bloom, then raspberry, and some other minor sources, till the main flow comes in June.

The next few months will be busy ones for the beekeeper, but most of them manage to snatch occasional days for some diversion, and I notice the dates of the June field days have been announced. These meetings draw uniformly good crowds, and serve to combine social contacts and recreation, with the acquisition of knowledge of the latest developments in our industry. — Allan T. Brown, Peterborough, Ontario.

SOUTHERN ALABAMA, May 10



Weather: The past winter was mild with little rain. Spring brought on many cool days and light frosts with a few more rains. We had a drought during April (the temperature went to 90 degrees in the shade) which extended into the first days of May. Today we had that much-needed rain and cooler weather. Rainfall is considerable below normal for this time of the year.

Bees and Plants: Bees wintered well with not too heavy food consumption. Colonies built up well this spring but still did not swarm much.

Honey plants were in good shape and bloomed well but many were a week or ten days in advance of their blooming dates. Gallberry came into bloom several days late this spring.

Miscellaneous: Last year most of the clovers for pasture came into bloom the same time our gallberry bloomed and the result was the bees deserted the clover for the gallberry. This spring, clovers bloomed nearly 10 days in advance of gallberry.

Corn syrups sell around 50 to 60 cents a quart in the local stores here with cane syrup at 85 cents a 5-lb. pail. No honey on the market locally except in small glass containers.

Alabama Farmers' Bulletin has

prices quoted by producers which may be of interest to beekeepers elsewhere. Ribben cane syrup, $1.25 a gallon, not prepaid; Sorghum syrup, $2.00 a gallon, not prepaid; 52 crop Titi honey, 10-lb. pail, $2.60, prepaid; Clover honey, $2.30 per gallon prepaid; 52 crop chunk honey, $3.25 per 10-lb. pail, postpaid; and orange blossom honey, $3.00 per 10-lb. pail, prepaid.

Prices differ considerably because each producer sets his own price.—H. G. Miller, Vinegar Bend, Ala.

WASHINGTON, May 12

Weather: April was a dry cool month for this section of the country. We had several nights below freezing that tied the 65-year record. So far in May we have had three nights with killing frosts and a little more moisture so far than we had during April. However, the outlook is for a fair honey crop as all honey plants are in excellent condition.

Condition of Colonies: Most colonies came through the winter in much better condition than they did a year ago. From Washington State Beekeepers' Association Bulletin, we read, "Bees have wintered well and are starting brood in from three to four frames. (Feb. 29). Pollen has been coming in well on the coast. Prospects for a good honey crop are as good or better than for several years". I am sure this excerpt from the bulletin applies to this part of the state, and Northwest Oregon.

Colonies that were not properly looked after began swarming much earlier than usual. I was called to a ranch on the second day of April to hive a swarm and it was really a swarm as it more than filled a ten-frame hive body. I had to place a super on to take care of all the bees.

Have found several colonies that were queenless, some having been without a queen for quite some time. I was in Williams Bros. Mfg. Co. in Portland recently and Mr. Roscoe Williams tells me that his state had considerable queen loss. I do not know whether this is just one of those things, or if it is due to the queen rearing.

Miscellaneous: It appears that our State Legislature has let the industry down again, as they failed to appropriate money for a thorough job of inspection. All producers pay a tax shown in the form of a seal on the honey they sell and this is supposed to help pay the inspection expense. Our inspectors have done an excellent job of eradicating A.F.B. and to let this inspection go for a full year may put it back for several years again.

I would like to take this opportunity to congratulate Dr. A. M. Walrath, 1332 Medical Dental Bldg., Seattle, for the wonderful job he is doing on the Washington State Association Quarterly Bulletin. This writer is not personally acquainted with Dr. Walrath but I do know that he has done a wonderful job for the industry and deserves a lot of credit.—Walter Evans, Longview, Wash.

Left to right: Prof. D. Dunavan, Associate Professor of Entomology and Zoology; W. C. Johnson, Extension Bee Specialist; G. C. Gaskin, Retiring President of State Association; W. H. Purser, State Inspector; Dr. M. D. Farrar, State Entomologist, Head Dept. of Entomology and Zoology. Photo taken during the spring meeting of the Palmetto State Beekeepers' Association at Columbia, South Carolina, on March 12.

American Beekeeping Federation

By Glenn Gibson, President

Mr. Glenn Gibson

Several weeks have now elapsed since the American Beekeeping Federation convened at Dallas, where I was elected to serve as President for the current year. This is indeed, a high honor — the highest an industry can give. My only hope is that I may be able to properly execute the duties of this office, and continue to merit the confidence of those within our beekeeping world; a confidence that was evidenced not only through the medium of election, but also by the many words and letters of congratulation and encouragement received from those within the industry. Certainly, these give one the courage to proceed as he thinks best.

When considering the many problems of our industry, one must direct his thinking on a national scale. Although our industry embraces a multitude of problems peculiar to given areas, it is nation wide and must be considered as such.

While thinking on this basis, many thoughts come to mind—some of them are most disturbing. **What are my duties as president?** Will those within the industry approve of my decisions and actions? Will relations with the Directors and Executives be pleasant? Why were so many of our industry leaders absent from the Dallas convention? Their attendance would have been most welcome and helpful in the conduct of the meetings. I am sure these men had good reasons for not being in attendance, but could these reasons have included a lack of interest in our activities? Are we failing in our obligation to provide leadership that is recognized by the rank and file?

During the coming year, we will find it necessary to seek solutions to many problems that will arise. The Executive Committee will consider and act on a number of factors. Many of these thoughts will be new for our industry and old for others. Some ideas that seem new to us are only tailored to fit our needs. I have received many suggestions for improvement of our industry but upon investigation find that these are not new to our sister industries in agriculture. The members of the Executive Committee report they also have received many suggestions. Some of these have value; others indicate a lack of understanding of the over-all problem.

Almost without exception, the demand is for higher production returns but few admit their personal responsibility in bringing about this desired result, and this responsibility does exist regardless of the scale of our individual operations. Forces within our ranks are unwittingly pulling against each other without realizing the extent of damage to others. Asking the package bee men to reduce prices is not a solution. Demanding that our packers raise prices will accomplish nothing. Expecting some one else to raise organizational funds is inviting defeat. The solution to our economic difficulties will come when and if we are prepared to meet and cope with the basic principles involved.

However, we invite all suggestions and advice. At best, the governing body of the Federation can do no more than formulate plans for the improvement of our industry — plans born of their best thought and effort combined with those from the field. We must search for precedent in other industries; we must seek professional advice whether that be from the field of promotion or law.

(Continued on page 374)

American Honey Institute News Notes

By Harriett M. Grace, Director
Commercial State Bank Building
Madison 3, Wisconsin

For twenty-odd years now the American Honey Institute has backed up every beekeeper's bid for an open honey market by giving his honey a boost through national promotion.

In the last few years the operations of the Institute and the support given it by the beekeepers themselves have shifted into high gear. Support of the Institute has so strengthened that the American Honey Institute holds the unique position of being recognized by other leading food industries as the spokesman for the honey industry as a whole.

Beekeepers and their product are now represented at all national food conferences; honey is recognized as a leading American foodstuff that deserves the services of a trade association such as the American Honey Institute.

There is a reason that the American Honey Institute has become so strong. It can be stated simply: Beekeepers themselves delegate responsibility to the Institute by their wholehearted financial support.

Here is why beekeepers contribute money:

1. **They see in their Institute a soundly constructed, soundly financed organization.** When the Institute was in its infancy, the founders clamped certain provisos upon its corporate charter that would insure its success. For one, the Institute was to be a non-profit organization solely concerned with the task of promoting honey, not with the chore of earning money. It was to remain small, unburdened with a complicated superstructure of organization. And it was to be financed by the men who had the most to gain by its continued operations—the beekeepers themselves.

With this firm foundation the Institute grew — and grew strong.

2. **Beekeepers see in their Institute a chance to present a unified front in the competitive and complex food markets of today.** Through the Institute honey grows out of its embryo state of being a minor business into a full-fledged national industry. This unity of interest among beekeepers keeps honey afloat in the whirling tides and eddies of the competitive market.

3. **Beekeepers find in their Institute a chance to better their own individual honey business.** In the Institute lies the means to print large quantities of honey literature in pamphlet form. Experts work out the books attractively and write pleasing copy to go in them. These books are printed in large enough quantity so that all beekeepers may have access to them. These books can be sold to the beekeepers **at cost** at a price that would be vastly smaller than if he undertook to do such a project by himself. And the postal rates are paid on the books thereby freeing the beekeeper from that cost.

4. **Beekeepers find in their Institute a chance to promote their honey without it costing them a cent except for their dues.** Should an individual beekeeper go into a newspaper editorial room to try to get the food editor to print an article on honey, he would immediately be referred back to the advertising department, where he would be told that they'd be glad to run the honey story at so much $$$ a column inch. In other words, he'd have to pay for it. But the Institute, backed by its own good name, is established with food editors of the country as well as with the radio commentators. An individual beekeeper hasn't a chance in the world of equaling this record, but the beekeeper can and should advertise his own brand of honey.

5. **Beekeepers see that their Institute gives their product prestige and builds up good will with other industries.** And this is most important. For it is only with a friendly, cooperative attitude that honey can find itself a member of any of the vast number of joint-promotion ideas that go on in the large food industries of the country. Here the Institute excels. Much credit is due it for the respect and prestige honey now commands.

6. **Beekeepers see in their Institute a chance to invest money wisely.** For the sum of money the beekeeper sends to the Institute he

(Continued on page 375)

The apiary is nicely located on a side hill facing south.

Caught Possum, not Skunk

By R. E. Lyon, Collins, N. Y.

When I was at my little apiary of 20 colonies setting out some small hemlock trees for a screen between the hives and the highway a few days ago I noticed that what I supposed was a skunk, had been scratching on the end of the hive near the entrance. When I went up the next day, I took along an egg poisoned with strychnine sulfate and put it in front of that hive. The next day I was there again, and instead of a skunk I had a large fat possum. Will they eat bees? I don't remember reading that they will and I have been reading bee magazines and books for 33 years, ever since I began keeping bees. I am going to watch that hive and if the scratching on it is stopped I will think the

The hives are so placed that they are easy to work.

possum was doing it.

I moved my bees from my back lot here in the village during August and September when they were three stories high. I did it alone and as I am 74 years old and weigh only 118 pounds, I had to split them into two parts and wheel them on a wheelbarrow to the car and take them, one colony at a time, in the trunk. The new location is only a mile from my home. It made the bees so sassy that they stung me through two thicknesses of clothing. I didn't mind that much though.

I feel so proud of my little apiary in its new location that I took two photos of it. The hives get sunshine until well after noon and then are shaded mostly during the hot afternoons.

I never kept more than 30 or 35 colonies at a time. Have been just a "backlotter".

I am a retired State Civil Service photographer.

[Does any one know if possums bother bees?—Ed.]

The Pollen Moth

By Allen Latham, Norwichtown, Conn.

Why do intelligent beekeepers continue to use the term "wax moth"? As intelligent as Mr. Issacson is in his Second Glances he still uses the term "wax moth". Obviously he has never made a careful study of the moth that infests our beehives. Many years ago I began to doubt the correctness of that term. About 40 years ago I thought I would see what the droppings of the caterpillar of the moth were. I took some into the kitchen and dropped them upon the hot stove. Now regular caterpillar droppings when dropped upon a hot stove will dry up and smoke and possibly catch fire. In the case of the droppings of the "wax moth" almost immediately a thin pool of melted wax spreads about the droppings.

Not a few times have I found foundation attacked by the caterpillar, but I never found a caterpillar that was not half starved and very small. Possibly the soap on the foundation gave them a little nourishment. If the bees in a hive die out and leave combs with no pollen in them the result is that those combs are never completely eaten and if any caterpillars are found they are runts. It is true that the caterpillar can eat the cocoons in the cells and the excrement in the bottom of each cell. If there is much old drone comb they grow rather well on the cocoons and excrement of the drone larvae, but the resulting moths are never full size. What is known as the lesser "wax moth" lives more on the refuse on the bottom of the hive than they do on the combs. They could well be termed refuse moths.

Obviously there was such a time when the "wax moth" was not present in the homes of the honey bee. What happened to cause the insect to invade the bees' home? It takes little imagination to believe that years ago bees gathering pollen unknowingly picked up eggs of the "wax moth" and taking them home some survived and hatching in the home of the bee had to live upon something in the home of the bee. This thing probably happened again and again. Eventually moths that matured in bee homes were there mated and laid their eggs in the bee home.

Anyone who has seen some of the flora of the equatorial region could readily consider that many of those flowers were very rich in pollen. This is especially true of the banana plant. There are literally loads of pollen in the flowers of that plant. The stalk of the plant grows up eight feet or so and then bends over. First there will be a foot or two feet of pistillate bloom and then some three feet of staminate bloom. The blossoms abound for days, giving ample time to the pollen moth to develop as a caterpillar and then spin a cocoon. If I ever have the opportunity in the South to see a banana plantation I shall look sharply for larvae which are familiar to all of us.

The pollen moth has made beehives their home for untold ages and doubtless will never cease to use the hive as a home. Also doubtless thousands of beekeepers will still speak of wax moths. I love

(Continued on page 373)

Asked & Answered

Salvaging Wax and Honey from Granulated Combs of Honey

Question: I have about 40 supers of standard combs full of granulated honey from about four years ago. I would like to get this honey out, but, from experience I know that the bees are the only ones who can do the job. I also know that if these empty combs stand around the wax moths will ruin them. Would it be practical to make a large solar extractor which would render possibly four combs at once and in this way salvage the frames? It would also save the honey which is goldenrod.—E. A. Walldorf, N. Y.

Answer: It would seem that your best method for salvaging the honey and wax from the combs of granulated honey would be to cut the combs out of the frames into 60-lb. cans with the tops cut out. These cans containing the combs should then be placed in a boiler which contains water, over a hot plate. The water should be heated so that the combs containing the honey and wax will melt. After the contents of the cans are in solution, the water should be allowed to cool. In due time the wax being lighter than honey, will solidify on the surface, the honey remaining at the bottom. The chunk of wax can be lifted off. The honey should be reheated, then strained through one or two thicknesses of cheesecloth to remove any foreign material such as small particles of wax. In this way you can salvage all of the honey and wax.

Clipping the Queen's Wings

Question: I still don't understand how a queen is removed from the combs without being stung. By wearing gloves, chances are when you take hold of her she would be crushed. So here is what I have been doing. Please tell me which is wrong. I wear gloves and take out each frame until I find the queen (which is not much trouble), and then I pull the glove off the hand in which I use the scissors, then I follow her around on the comb until I have a chance to put the scissors under her wings and clip them. It's so quick she never knows what has happened. I use barber scissors.—Frank Brazzle, N. C.

Answer: In order to remove a queen from a comb you simply take hold of her wings with the thumb and first finger. This is easily done. If you use a little smoke and do not get the bees stirred up, it is possible to handle the queen without being stung. Your method of clipping the queen's wings while she is on the comb is practiced by some beekeepers. This takes a little time. A queen that is laying well and is full of eggs moves over the combs rather slowly and it is therefore possible to clip one of her wings without much trouble. Since you practice this method of clipping, we suggest that you continue it rather than try to clip the wings while holding the queen. You should not wear gloves when handling a queen.

Preservatives for Hive Parts

Question: Can you please give me some information on wood preservatives for use on bee hives and bottom boards? Would Pentachlorophenol be all right for use?—Frank Brown, Pa.

Answer: Pentachlorophenol is the chemical name for a number of products that go by trade names such as Wood Life, Permatox, and Woodtox. Usually one of these brands may be obtained at your local hardware store. Several tests have been run on hives painted or dipped in Pentachlorophenol. Dr. Dyce of Cornell University reported that the treatment seems to have no effect on the bees if the parts after being treated are ventilated for a week or two.

Ample Stores During Spring Months

Question: Upon opening a hive in the spring we find considerable stores of honey. Should this honey be removed and if so, how much, or would you advise leaving the honey and placing an extra brood chamber with a comb foundation on top?—George F. Gallup, Kentucky.

Answer: It seems probable that you have your colony in a double brood chamber, sometimes called a food-chamber hive. Some years ago it was customary to winter bees in single story brood chambers. As a matter of fact, quite a number of beekeepers over the country are still practicing this. In most instances such colonies in single-story hives do not have an adequate amount of honey for winter and early spring food. That is why the food-chamber hive is now in general use, especially among commercial beekeepers. Supers, for the purpose of producing extracted honey, are placed on top of the two story brood chambers. When you open hives early in the spring and see a considerable amount of sealed honey in the combs, this may seem like an unnecessary amount of stores to leave in the hive but during the spring months there are likely to be spells of cool, rainy weather when the bees are unable to collect pollen

(Continued on next page)

There are Other Ways

By Walter Byrd, Buffalo, N. Y.

There is an elderly beekeeper I know who lives on a small isolated farm in Western New York. There are long periods of time when my friend is not in contact with other people. He is a quiet sort of a person with a ready smile and is always eager to discuss bees with whoever will lend an ear.

Behind his small farm house he keeps 20 shabby beehives which are set in two rows. The hives are almost completely hidden by the weeds which grow up about them. The boxes are homemade and remain unpainted after more than 15 years of weathering. Some of the hive boxes are badly warped and split. The bees are kept in one-story brood chambers which are separated from the supers by a queen excluder. From time to time one end of the super is lifted to see how heavy it is and when it seems to be full a new super is added. Most of the bees were gathered from swarms and aren't from any particular breed. Queen cells are never removed from the hives and the bees often swarm. To accommodate the swarms there are always a couple of empty hives set at one end of the yard for them to occupy and they often do. Occasionally it occurs that swarms from someone else's bees will take over these empty hives.

After his daily chores are over my friend spends his time sitting in a beat-up rocking chair on the back porch of his house instead of working over his colonies like he should. He isn't very educated on the subject of beekeeping and it makes me feel sad to see how poorly his colonies are kept. He doesn't even read literature on bees to keep up with the latest developments.

From his rocking chair he watches the bees come and go from the hives. He notes which direction they are headed for and often he will hike out on the back country roads to find out what flowers his bees are working on. His philosophy on bees is simple: "Leave them alone and they will be better off".

Now this man is not what I would call a good beekeeper. In fact, he is not even average. He breaks every rule in the books. I feel I am more what a beekeeper should be. For the past seven years I have kept six colonies of bees as a hobby and I give them the best of care. All the equipment I use is the very best. My colonies are painted white and they remain spotlessly clean all year. In addition I collect all the latest books and bulletins on beekeeping and devour the contents in my spare time. I have a wonderful library at my fingertips to guide me and I follow all the rules.

I use two brood boxes instead of one to build populous colonies. I feed pollen substitute and sugar water in the spring. Throughout the year I manipulate the supers according to various authorities. Every two weeks I check through the combs to find and cut out queen cells. If there are not enough empty combs for the queen to lay in I furnish more. The queens I purchase are the best bred hybrids. Each fall I requeen to keep my colonies in the best possible condition. I follow the rules closer than anybody else I know of in the bee business because I know it will pay off in the end and believe me it does. Since I started beekeeping I find I can boast an average of almost 75 pounds of honey per colony annually.

You know I feel sorry for my friend who still remains uneducated to the proper methods of beekeeping. I'd like to tell him he doesn't know the first thing about bees but as long as he is content with 120 pounds of honey per colony each year I'll let him continue with his old ways.

ASKED AND ANSWERED

(Continued from previous page)

and nectar. It is during these cool spells that bees use an enormous amount of stores for brood rearing. Some of the old bee masters have said there should never be less than 15 pounds of sealed stores in a hive during any time of the spring season. If the stores fall below this amount, the queen is likely to curtail her egg-laying. When there is an abundance of stores in the hives, the honey is converted into young bees. Strong colonies are needed to gather the maximum honey crop and that is why an abundance of stores is essential for maximum results in honey production.

Just News

The Westchester County Beekeepers' Association will hold its regular monthly meeting at 2:30 P. M. on June 15, at the home of Carlton E. Slater, 17 Bronson Ave., Larchmont, N. Y. just off U. S. Route 1. A good program is planned. An inspection of hives will be made for the benefit of the new beekeeper members. Refreshments will be served, visitors are welcome.—Carlton E. Slater, Publicity.

* * * * *

The new officers for the **Middlesex County Beekeepers' Association** are as follows: Chester McInnis, President; A. K. Tinkham, Vice-President; John H. Furber, Secretary-Treasurer. The next regular outdoor meeting will be held at the apiaries of member R. B. Downing at Westford, Mass., where the Association Hive started at the April meeting in Waltham will be inspected along with other hives.—John H. Furber, Sec.-Treas.

* * * * *

The Logan County (Ohio) Beekeepers' Association held their May meeting at Gardner Hall's home near Huntsville, Ohio, May 8. Guest speaker was Mr. Elmer Smith of Benton Ridge, Ohio, and his talk was on "Producing More and Better Comb Honey in Western Ohio". The Association is holding a picnic on July 13, at 1:00 P. M., at the home of Mr. and Mrs. Albert Claggs, near Bellefontaine. All beekeepers in the County are invited to attend. —R. L. Livermore, President.

* * * * *

New officers of **The Connecticut Beekeepers' Association** are: President: William J. McCormick, 1464 North Avenue, Stratford, Conn.; Secretary: Mrs. Andrew Creevy, Huntington Ave., Stratford, Conn.; Treasurer: Charles J. Rost, 22 Lanouette Street, Meriden, Conn.; Publicity Chairman: Philemon J. Hewitt, Jr., Litchfield, Conn.

Meetings of the **Bee School** will be held at the New Haven Experiment Station, New Haven, June 8, June 22, July 13, Sept. 7, at 2:00 o'clock P. M., rain or shine. The summer field day meeting will be held June 28 at the home of Leon Lumpkin, East Main St., Caanan, Conn. Out-of-state beekeepers are welcome to attend and share in the fellowship and delicious potluck lunch. The meeting will be held rain or shine.—Philemon J. Hewitt, Jr., Publicity Chairman.

* * * * *

The Lake Region Beekeepers' Association will meet at V. A. Sundberg and Sons apiary in Richville, Minn., on July 8, 1952, at 8:00 P. M. —L. W. Sundberg, Sec.

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The St. Clair Beekeepers' Association held their regular monthly meeting on May 7th and it was decided to call off the southern zone meeting, which was to be held in June, because of conditions beyond our control. They did decide to have a picnic on August 24th at the Clifford Wilder home near Waterloo, Ill. This will be a basket picnic. The next meeting will be held June 4th at the County Highway Building in Belleville, Ill., at 8:00 P. M. DST. at which time definite plans will be made as to what type exhibit will be made at the county fair.—L. M. Leiper, Sec'y.-Treas.

* * * * *

The Lorain County Beekeepers' Association will hold its Sixth Annual Field Day on Sunday, June 29, at the Fairgrounds in Wellington, Ohio. Believing that bees at work and the methods used by beekeepers in the manipulation of colonies are of interest to the general public as well as other beekeepers, every effort is made to make these outdoor meetings interesting as well as informative. More than 200 people were in attendance to watch the demonstrations last year.

Prominent persons in beekeeping who will give demonstrated talks at this year's meeting are Charles Reese, Extension Apiarist; W. E. Dunham of Ohio State University, and S. E. Bailey, State Apiarist who will talk on inspection and the registration law. There will be judging of observation hives and supers of comb honey, if available at that date. Prizes will be offered to the winners. An innovation this year will be the selection of the prettiest girl present who will be crowned "Honey Queen". There will be demonstrations of hiving a swarm, installation of package bees, manipulation, and feeding of colonies, division of colonies, etc. Carl C. Deeds, Lorain County Agricul-

tural Extension Agent, will act as Master of Ceremonies for the day. Harry J. Vandenberg of LaGrange, Lorain County Bee Inspector, is General Chairman, and Roscoe Oney of Wellington is in charge of arrangements. Judging starts at 10 A. M., followed by a picnic lunch at noon. The afternoon session starts at 1 P. M. There is no admission charge and everyone is welcome.—Harry J. Vandenberg.

* * * * *

Dan H. Hillman, former Utah honey producer and State Apiarist, died

(Continued on page 376)

San Antonio Beekeepers Meet

Alvin Clark of Bandera, Texas

Walter Green, President of San Antonio District Beekeepers' Association

The San Antonio District Beekeepers' Association held a meeting on March 28th. The honey marketing program was discussed fully as was the advertising plan proposed by the National Federation of Beekeepers. It was agreed that whatever the program was, it should be of such a nature that it could be kept up. The splendid quality of Texas guajilla, mesquite, and catsclaw honeys is such that the selling problem is not a difficult one.

Walter Green of San Antonio was reelected President, D. W. DeLaney, Vice-President, and D. C. Babcock, Secretary-Treasurer.

Alvin Clark is one of the well-known beekeepers in Texas. He was formerly in partnership with A. M. Patterson. Mr. Clark has been keeping bees for 33 years. He operates approximately 600 colonies at the present time around Charlotte. Mr. Clark lives at Bandera in the beautiful hilly country north of San Antonio where he has a fine fruit orchard.—H. H. Root.

Mr. and Mrs. D. C. Babcock

XUM

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Onsted, Michigan.

ANY GRADE—Any amount. Alexander Co., 819 Reynolds, Toledo, Ohio.

IOWA Honey, one can or truck loads. Russell D. Smalley, Beaver, Iowa.

ORANGE, Palmetto, and Mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

CLOVER extracted honey in sixties. Abram Brubaker, Lancaster, Pa., Rt. 1.

Honey, white clover, 17c per lb. in single cans, 16c in lots of 5 cans or more. Lose Brothers, 206 E. Jefferson, Louisville, Ky.

STOLLER'S fancy clover honey in new sixties. Stoller Honey Farms, Latty, Ohio.

BEST CLOVER HONEY, 60-lb. cans, 15c lb. Irvin Van Devier, Medina, Ohio.

FOR SALE—White bottling grade honey by the truckload. Walter Roose, Sac City, Iowa.

Michigan's finest raspberry, basswood, clover comb honey, in 4 x 5 window cartoned sections. Fancy, $6.00; No. 1, $5.00; No. 2, $4.00; case. E. Z. Quick Way B Farms, Walloon Lake, Michigan.

FOR SALE—Liquid white clover in 60's, 15c. F. J. Smith, Castalia, Ohio.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on COD terms except where the buyer has thoroughly established his credit with the seller.

CASH FOR YOUR HONEY—Light extracted or comb. Regular trade send sample. 60-lb. cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

CASH FOR BEESWAX. Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & Company, 1360 Produce St., Los Angeles 21, California.

HONEY WANTED, any amount. If you want more for your honey, sell it to Cloverdale Honey Co., Fredonia, N. Y.

ALL GRADES HONEY AND WAX WANTED—Mail samples, advise quantity and cash prices delivered to us. HONEY SALES COMPANY, 1808 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINN.

BEFORE YOU SELL your clover honey contact us. Send samples and tell us how much you have. The Delaware White Clover Apiaries, 139 West William St., Delaware, Ohio.

WRITE FOR shipping tags and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 percent saving. Walter T. Kelley Co., Paducah, Kentucky.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 No. High St., Columbus 14, Ohio.

WANTED — White extracted or comb honey. Send sample. Millersport Honey Co., Millersport, Ohio.

WANTED three carloads of buckwheat honey, two carloads of Florida orange blossom honey in barrels or cans, two carloads of southwestern alfalfa or cotton honey. Cash and top prices. Alexander Company, 819 Reynolds Road, Toledo, O.

WANTED—Light amber clover, amber, goldenrod, buckwheat. Advise what you have for immediate delivery. Roscoe F. Wixson, Dundee, N. Y.

FOR SALE

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies and Comb Foundation. Onsted, Mich.

The only comb foundation plant in the east. We sell foundation, work your wax, render combs and cappings. Robinson's Wax Works, R. D. 3, Auburn, N. Y.

BEE SUPPLIES. Catalog free. Hodgson Bee Supplies Ltd., 575 13th Ave., New Westminster, B. C., Canada.

BEE SUPPLIES—Tin packages; 10 sizes glass jars; paper shipping supplies; window cartons and other items. Roscoe F. Wixson, Dundee, N. Y.

THE BIGGEST BEE SUPPLY Catalog published (64 pages) free for the asking. Listing many items not found in other Catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO., PADUCAH, KENTUCKY.

QUEENBEE PAINTING OUTFIT, $1.50; colony records 10, 15c postpaid. Southwick Apiaries, Waban, Mass.

FOR SALE — 800 used honey cans, 2½ inch mouths, washed and dried, no rust. D. F. Treap, R. D. 3, Kent, Ohio.

FOR SALE—New and used bee equipment. Write Ed. Bennett, 429 N. East St., Boyne City, Mich.

SIMPLEX TRAP clips queens without handling, $1.00 postpaid. Instant Frame Spacers — eight-nine, specify size, $1.50 postpaid. Free circulars. George Leys, 36 Jackson St., New Rochelle, N. Y.

GET THEM while you can. New or used cans and Root Supplies for cash or honey of any kind. L. E. Hicks, 3930 N. High St., Columbus 14, Ohio.

FOR CHRYSLER ALL-STEEL electric welded queen excluders in the U. S. A., write to: Prairie View Honey Co., 12303 12th Street, Detroit 6, Michigan. Ask for Circular E 2.

FOR SALE — 12 colonies of bees in Standard 10-frame hives. All have from one to five supers on them. Practically all new Root and Dadant-Lewis equipment. Were inspected last fall by Pennsylvania bee inspector, everything was O. K. My hives are all good strong colonies. J. Evans Smeltzer, 1213 S. Albemarle St., Phone 79302, York, Pa.

FOR SALE—40 used extracting supers and full depth. Alfred Briggs, New Sharon, Iowa.

FOR SALE: Root 45-frame extractor, 140-gallon tank, power uncapping machine. Irvin Van Devier, Medina, Ohio.

FOR SALE—30-frame radial honey extractor with ½ h.p. motor. Tanks, 100 shallow supers with frames, body hives, and other supplies. Emily A. Burian, 521 E. 4th St., West Liberty, Iowa.

FOR IMMEDIATE DISPOSAL 140 colonies of bees and equipment. 100 12-frame, 40 10-frame. Also considerable quantity of extra 10 and 12-frame telescope covers, foundation, and frames. State inspected. Disease free. Sell all or part. Any reasonable offer accepted, or trade for anything of value. George Olowach, Custer, Mich.

FOR SALE — Balance of bee business. About 200 colonies and considerable equipment, including locations. Inventory on request. Stevens Apiaries, Oberlin, Ohio.

25 colonies of bees for sale, $10.00 each. Also 4-frame Reversible extractor in very good shape, $50.00. Paul E. Culler, Lucas, Rt. 1, Ohio.

A Root Simplicity 45-frame extractor in first class shape. Meadowgold Apiaries, 118 Vine St., Batavia, N. Y.

Two-frame reversible extractor, large baskets, power drive. W. Arant, Forest Grove, Oregon.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

CAUCASIAN queens, young laying. Personally raised, $1.00 each. Fred Brock, McDonald, Tenn.

HONEY WANTED
Carloads and less than carloads. Mail sample and best prices in all grades.
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The finest thing ever offered beekeepers. See your dealer, or write

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Let us do your wax **rendering** and handle your wax at highest market prices and also **Mill** your **Wax** into **finest** quality **comb foundation.**

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Cut Comb and Extracted
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Keep up on markets, practices, scientific data, regulations, and plant possibilities.

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Peace is for the strong . . .
Buy U. S. Defense Bonds regularly!

CAUCASIANS—2 pound packages, $3.00; 3 pound packages, $4.00. Queens, $1.00 each. Lewis and Tillery Bee Co., Route 1, Box 294, Greenville, Ala.

EARLY PACKAGE BEES. Prompt shipment begins May 10th. Two-pound package and queen, $5.50 postpaid. Three-pound package and queen, $6.60 postpaid. Choice Italian queen, $1.25. Safe arrival guaranteed. Health certificate furnished. Birdie M. Hartle, Reynoldsville, Pa.

GREEN'S PROFIT PRODUCING Italian queens will please you. My 25 years' experience is your safe guard. If you want a better hive of bees, get a better queen. Start shipping about March first. Price, 90c each. After June first, 50c each. Cash before shipping dates. D. P. Green, De Land, Fla., R. 2, Phone 512M.

Will fill your cages with certified Italians. 50c pound after May 15th. Write for other package prices. A. V. Dowling, Valdosta, Georgia.

THREE BANDED ITALIAN bees and queens. Good workers and gentle. 2-lb. with queen, $3.00; 3-lb. with queen, $4.00. Select untested queens, 1 to 25, $1.00; 25 to 100, 90c; 100 up, 80c. Write for prices on larger orders. Satisfaction guaranteed. Alamance Bee Company, Geo. E. Curtis, Mgr., Phone 4703, Graham, N. C.

YANCEY HUSTLERS — Packages and Queens, ready April 1st. Three-band Italians, bred for business. Overweight packages, queens spring-reared under ideal conditions. All guaranteed to please. 2-lb. pkg. with queen, $3.50; 25 or more, $3.25 each; 50 or more, $3.00 each. For 3-lb. packages, add $1.00 to above prices. Caney Valley Apiaries, 2500 Nicholas, Bay City, Texas.

GOLDEN ITALIAN BEES AND QUEENS. Very yellow and gentle. 2-lb. with queen, $3.00; 3-lb. with queen, $4.00; Select untested queens, 1 to 25, $1.00; 25 to 100, 90c; 100 up, 80c each. Carolina Bee Farm, W. O. Curtis, Phone 7731, Graham, N. C.

CAUCASIAN BEES AND QUEENS. Extra good workers and very gentle, 2-lb. with queen, $3.00; 3-lb. with queen, $4.00. Untested queens, 1 to 25, $1.00, 25-100, 90c, 100 up, 80c. Black River Apiaries, Elliott Curtis, Mgr., Currie, N. C.

NORTHERN ITALIAN QUEENS—Ready June 25th, $1.00 each; 10 up, 90c. Shirl Baker, Rodney, Mich.

TRY MY CAUCASIAN queens, personally reared. Ten years' experience. $1.00 each. Eppling's Apiaries, Covington, Va.

YELLOW ITALIAN bees and queens. Quality and service guaranteed. 2-lbs. with queen, $3.65; 3-lbs., $4.65; queens, 80c, airmail. O. E. Brown, Route 1, Asheboro, N. C.

ANGORA GOATS

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser, Hotel Cactus, San Angelo, Texas, the only ranch magazine published serving the Angora Goat industry. Subscription, $1.00. Sample copy fifteen cents.

HELP WANTED

WANTED: A young man with some experience in beekeeping for apiary work. An opportunity to learn various phases of the bee business. The A. I. Root Co., Medina, Ohio.

WANTED to hear from a young Farm Catholic couple to help in bee business and take over large productive farm on easy payment, in northern Ohio. Box 652, Gleanings, Medina, Ohio.

Applications wanted for year around work in commercial beekeeping. Give experience, age, and salary details in first letter. York Bee Company, Jesup, Georgia.

SEEDS

HONEY PLANTS our specialty. Catalog on request. Pellett Gardens, Atlantic, Iowa.

MAGAZINES

WESTERN CANADA BEEKEEPER—Official organ of the Manitoba Beekeepers' Association. One year, $1.50; two years, $2.25; three years, $3.00. In combination with Gleanings in Bee Culture, $2.75. 211 Affleck Bldg., Winnipeg, Canada.

THE BEE WORLD, international and scientific journal on bees and beekeeping, with apiculture abstracts. Monthly, including membership in the Bee Research Association, $3.00 per annum, including apicultural abstracts. Dr. Eva Crane, Director, 55 Newland Park, Hull, Yorks, Eng.

Know interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarrh, Dist. Naini Tal, U. P., India, or available through them. Subs. Rs7/ or 10 shillings or 2.25 dollars per annum. Single copy, Rs ¼s. 1/9 or 40 cents (International Money Order). Payment in mint postage stamps of your country accepted.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

Peace is for the strong . . .

Buy U. S. Defense Bonds regularly!

THE POLLEN MOTH

(Continued from page 365)

the truth. In my 67 years of study of the honey bee I have been very careful to interpret all their activities. In the second year of my beekeeping in Lancaster, Massachusetts, I became the authority about bees in that village. Even old beekeepers came to me for advice. Not a one of them at that time had ever used a frame hive, whereas I made such a hive in my second year, and I began to get honey crops that old methods never did. I speak thus because I wish to assure all my readers that I never write anything about bees unless I know what I am writing about. Hornets, bumblebees, and wasps of all sorts have been to me most interesting things to study carefully.

60-LB CANS

Several
Thousand
Used Cans
Just Like New

Also

Brand New Cans
With Large
Size Openings
Packed in Cartons
of 24 or
in Bulk Truckloads
or Carloads

HONEY LABELS

HONEY JARS IN ALL SIZES

5-lb. Pails

10-lb. Pails

CORRUGATED SHIPPING CASES
Please write for prices.

C. W. Aeppler Co.

Drawer 239
Oconomowoc, Wisconsin

1952 QUEEN BEES
3-Banded Italians
1-9 ..... $1.10
10 or more 1.00
Geo. W. Moore
Shasta, Shasta Co., California

HARDY NORTHERN YANKEE QUEENS
Only Tested Queens $1.00
Our Tested Italian Queens are kept in our nucs to determine if mating is pure, are gentle, and have ability to lay properly.
Please order in advance.
R. L. LIVERMORE APIARIES
Belle Center, Ohio

QUEENS
Top Quality Italians
Personally Raised
After May 10th $1.00 each
Post Paid Airmail
SAM E. MOORE
2436 North St. Ph. 293 R
Redding, Calif.

KOEHNEN'S
Package Bees and Queens
For Quality and Service
KOEHNEN'S APIARIES
GLENN, CALIFORNIA

AND NOW AGAIN
We are accepting orders for shipment beginning on or about June 15, for our HARDY NORTHERN BRED leather colored Queens. $1.25 ea. Discount on large orders.
The Delaware White Clover Apiaries
139 W. William St., Delaware, Ohio

The New Zealand Beekeeper
The Quarterly Magazine of the National Beekeepers' Association of New Zealand. Better Beekeeping—Better Marketing. Subscription, 8 shillings per year, payable to
THE GENERAL SECRETARY
Box 19 Foxton, New Zealand

Canada's
National Monthly Magazine
for Beekeepers
Canadian Bee Journal
Streetsville, Ontario, Canada
U. S. Subscription Price,
only $1.75 per year.

AMERICAN BEEKEEPING FEDERATION

(Continued from page 362)

We, as an industry, have already delayed too long the organized movement of which we are capable. The business world of today is complicated and fast moving. Little consideration is extended to those who tend to lag behind. When an industry, like ours, is extended to the four corners of the country, the first requisite is one of faith, understanding, and cooperation—a willingness to assume a full share of the burden, and pool our efforts to the advantage of all.

Those of us who have been charged with the responsibility of administrating affairs of the Federation labor endlessly. We find our correspondence heavy, and spend many hours with others—hours that could well be spent in our own bee yard.

Time alone will tell us if our efforts have been worth while. We can do no more than attempt to guide our efforts in a direction that will bring us closer to a goal of mutual satisfaction. God willing, and with your help, we can succeed.

Queens
75c each Air Mail
J. F. McVAY
Jackson, Ala.

We Have Nothing to Sell
But a Good Bee Journal
BEEKEEPERS MAGAZINE
Lansing 17, Michigan
Fourteenth Year of Publication
One Year, $2.00
Three Years, $5.00
Sample copy mailed upon request

BRITISH BEE JOURNAL
The Only WEEKLY Bee Journal in the World
Subscription $3.00 per annum payable in advance.
Keep up to Date in Beekeeping by taking out a subscription now through our agents:
Gleanings in Bee Culture
Medina, Ohio

LIVE AND LEARN

(Continued from page 346)

I have a couple of dummy hives set up in a couple of places, and you'd be surprised how many swarms I have caught in them. Some of them were not from my bees, either.

Speaking of other people's bees, I can't finish this until I tell you about the frantic lady who called up last year. Billions of bees were in her quince tree. Would I please come and take them away. I was coy, because I had heard that one before. Generally it was a hornet's nest. But she was so desperate that she offered me both the bees and a fee, so I figured that it would be charity if I relieved her mind. Yes, they were bees, and the swarm was easily as big as a grape fruit, and no, I didn't take any fee. Just for fun I kept them, and fed them all summer. At this writing they have come through the winter, and seem to be building up nicely, thank you, and I wouldn't be surprised if I got some honey from them this year.

AMERICAN HONEY INSTITUTE NEWS NOTES

(Continued from page 363)

gets fat returns in top grade honey promotion. This in turn makes his own honey more salable, and the demand starts snowballing faster than the supply, a situation most favorable to the beekeeper. Institute dues are a wise, prudent investment.

7. **And beekeepers like their Institute for it does not coerce dues from them.** Dues to the Institute are completely voluntary; the **amount of money** the beekeeper contributes, **the time** he sends it, the way he sends it is left completely up to the beekeeper. The Institute is not interested in levying a tax on the beekeepers; folks are discouraged enough with the present tax cut to withstand another. The Institute, rather, leaves it up to the **beekeeper's own conscience,** and to his sincere desire to make his honey business a going concern, to urge him to send in his dues.

This system has worked well in the past—we have every reason to believe it will continue to work in the future.

Selected Italian Queens 75c ea.
All queens shipped Air Mail and guaranteed to please.
Carniolans ..... $1.00 ea.
Caucasian queens . .90 ea.

Walter D. Leverette Apiaries
Box 364 Fort Pierce, Florida

ITALIAN
Bees and Queens
2-lb. pkg. each $2.50
3-lb. pkg. each 3.50
4-lb. pkg. each 4.20
Nice large queens
1-99 ..... 55c 100-up 50c
All queens are honeys for producing honey.
Mitchell's Apiaries
Box 391 Bunkie, La.

LADY LIKE CAUCASIAN bees in our testing apiaries in a North Central State more than doubled that state's average per colony honey crop in 1951. Our breeding queens for this season were selected for diease resistance, honey production, and gentleness. Their daughters will produce for you if properly handled.

Select untested queens $1.10

Queens clipped and marked free on request. Please print name and address.

Caucasian Apiaries
Castleberry, Ala.

Five Gallon Tanks

Made from heavy creamery tin, with ground valve faucet, inclined bottom for easy draining. Price $3.95 each delivered. Money refunded if not satisfied.

M. Y. S. Company
Bainbridge, N. Y.

A Famous Strain of Yellow Italians

produced by

The World's Most Modern Bee Breeding Establishment

Effective for balance of Season — off prices below

10% DISCOUNT ON PACKAGE BEES

25% DISCOUNT ON QUEEN BEES

Lot	Queens	2 lbs.	3 lbs.	4 lbs.	5 lbs.
1-5	$1.35	$3.55	$4.50	$5.45	$6.40
5-15	1.30	3.50	4.45	5.40	6.30
15-25	1.20	3.40	4.35	5.25	6.20
25-100	1.15	3.30	4.25	5.20	6.10
100-up	1.05	3.20	4.15	5.05	6.00

Select tested queen bees ..... $5.00 — no discount

The Daniels Apiaries Picayune, Miss.

JUST NEWS

(Continued from page 369)

at the age of 85 in Los Angeles on April 6th. The bee men of Utah will never forget him. He produced honey, first in Uintah and then in Salt Lake and Utah Counties, for approximately 35 years and was State Apiarist from 1921 to 1936. After Dan migrated from Iowa in 1894, he married a Utah girl, became a newspaper editor and owner and shared in developing the Uintah Basin's oil and honey resources. His wife Grace will continue living in California, where the two came eight years ago from Salt Lake City. Dan appropriately stocked his back yard with bees in his final years, and the last outdoor thing he did before his death from a virus complication was rescue a swarm from a tree.

Dan Hillman gave me my first painful lessons in the detection and control of A.F.B. He came to inspect my bees when I was just starting as a small producer. He found one bad cell of brood and then he gently but firmly convinced me that one bad cell of ropy brood spelled the end for one hive of bees. He educated many another beekeeper in this way. It was he who first introduced and enforced burning as the sure way to deal with outbreaks of A.F.B. in Utah. This practice stopped disease conditions that were rapidly undermining the bee industry. Dan knew disease and he knew men. When he found A.F.B. in a yard he would sit down with the owner, as a doctor would on finding a serious malignancy, and patiently explain the dangers of salvaging the affected hives. The owner usually got a shovel and began digging a big hole before Dan finished inspecting the last row.

The leaders of the honey industry in the West today can rightly pay tribute to this man who added his wisdom and his strength to the cause of disease control at a time when haphazard treatment practices were threatening to annihilate commercial beekeeping. — William Moran, Former Utah State Apiarist.

* * * * *

New Hampshire Beekeepers' Association will hold a meeting on Saturday, June 7, at the apiary of Comdr. C. R. Johnson, U.S.N. Ret., Cochrane Hill, New Boston, N. H., 1:00 P. M. A fine program has been arranged.

SWARMING AND SWARM CONTROL

(Continued from page 345)

"Inducing the bees to expand into and occupy supers as rapidly as the honey flow will justify during the first half of the honey flow, or at the time the colony is rapidly expanding in numbers.

"Providing additional space in the form of empty combs for the ripening of incoming nectar, so that the field bees can immediately dispose of the nectar they bring into the hive, to prevent the beginning of any stagnation of the activities of the colony.

"Removing some of the emerging brood to reduce the number of emerging bees within the brood chamber, thus producing a better distribution of the bees throughout the hive.

"The destruction of queen cells, providing they have been started but recently. Frequently, however, other cells are immediately started after the queen cells have been destroyed.

"As a remedy for swarming the beekeeper relieves the congestion of bees within the brood nest by creating conditions comparable either to the swarm or to the parent colony in nature."

HOWARD WEAVER'S

Caucasian Queens at the following prices for June:

1 - 24	$1.10
25 - 49	1.00
50 - up	.90

NOTICE — No package bees after May. My supply of queens will be limited after June.

Howard Weaver
Navasota, Texas

JUNE SPECIAL
ITALIAN BEES AND QUEENS

2-lb. pkg. with queen	$2.60
3-lb. pkg with queen	3.20
4-lb. pkg. with queen	3.80
5-lb. pkg. with queen	4.55
Extra queens	.60

Health certificate and live delivery guaranteed.

GASPARD BEE CO.
Hessmer, La.

Summer Prices
ON
PACKAGE BEES AND QUEENS

2-lb. pkgs. with queens, wt. 7-lbs., $2.00 any number

3-lb. pkgs. with queens, wt. 9-lbs., $2.50 any number

Untested queens, D.R. stock, 50c any number

Tested queens, D.R. stock, $1.00 any number

If bees are wanted by mail your Postmaster can tell you the amount to send, or write us. Queens delivered or clipped at above prices.

Merrill Bee Company
Box 115 State Line, Miss.

Three-Banded Italian Package Bees and Queens

Italian stock that is carefully selected primarily for what they produce and their gentleness. Place your 1952 requirements with me now. Have Caucasian queens also. Prices are:

2-lb. pkg. with queen	$2.50
3-lb. pkg. with queen	3.45
4-lb. pkg. with queen	4.15
Queens each	.75

Farris Homan
Shannon, Miss.

Package Bees
and
Queens
Write for Prices.

JACKSON APIARIES
Box 58, Funston, Ga. U.S.A.

JENSEN Says:

Good queens, with VIM, VIGOR, and VITALITY in every colony will bring up that per-colony average, which after all is what determines a good honey crop; not the occasional skyscraper. Uniformity of performance in brood-rearing, resulting in goodly populations of hustling bees is the essential element in the hive preceding and during the honey flow.

All other factors may be ever so equal, yet the net results disappointing. Foundation stock of proven merit, correct queen-rearing methods, plus persistence and vigilance, are some of the reasons why our standard of QUALITY has been maintained and improved. We challenge the field in VALUE, not price.

Prices for remainder of season.
"Magnolia State" Italians

1-24, $1.10	25-99, $1.00
100-999, 90c	1,000-up, 80c

Dadant's "Starline" Hybrids. The Original Disease Resistant Stock, greatly improved. Available only from breeders qualified to use the "Starline" Emblem. Don't be misled by promiscuous use of (D. R.) in advertising.

For "Starline" D. R. Hybrid Queens, add 25 cents each to prices.

JENSEN'S APIARIES, Macon, Miss., U.S.A

"The business "QUALITY" built.

THRIFTY QUEENS

Three-banded Italians only

Lots of 100 ..... $55.00

Smaller lots, each .65

REMEMBER — Thrifty Bees are Guaranteed to Please

W. J. Forehand & Sons
Fort Deposit, Ala.
Breeders Since 1892

Healthy Italian Bees Queens
Write for 1952 Prices
Georgia Bee & Honey Apiaries
P. O. Box 312 Hortense, Ga.

NORTHERN QUEENS

Pure leather colored acclimated Italian stock; shipping starts in May.

"They're Winterized"

Untested	$1.00
Select tested	2.00

Clipped, Air Mailed, Painted

BARGER APIARIES, Carey, O.

Three Banded Italians

2-lb. pkg. of bees	$3.00
3-lb. pkg. of bees	3.75
4-lb. pkg. of bees	4.50
Queens	1.00

Each package has a young laying queen.

We guarantee full weight, young bees, and live delivery by express.

W. E. Plant
Hattiesburg Mississippi

NORMAN BROS.

Package Bees & Queens

For profit or Pleasure

BRIGHT 3-BANDED ITALIANS
QUALITY PLUS SERVICE

NOW READY. Full weight, safe arrival, state health certificate, and satisfaction guaranteed.

— Prices —

2-lb. pkg. with queen	$2.75
3-lb. pkg. with queen	3.50
Untested queens	.60
Tested queens	1.00

Package bees are shipped Express F. O. B. If wanted shipped parcel post, add postage

NORMAN BROS. APIARIES
Ramer, Ala.

ITALIAN BEES AND QUEENS

2-lb. package with queen	$2.25
3-lb. package with queen	3.00
Queens (postpaid)	.65

Quality, service, satisfaction, live delivery and health certificate guaranteed.

BAYOU BEE CO.
Rt. 1 Box 49 Montegut, La.

BERRY'S
Old Reliable Italian Bees
57 Years With the Bees

America's Best Package Bees and Finest Queens

INSURE your honey crop with DEPENDABLE BERRY Bees

Prices: Quantity	Queens	Packages with queens 2 lb.	3 lb.	4 lb.	5 lb.
1 through 24	75c	$2.70	$3.70	$4.70	$5.70
25 through 99	70c	2.60	3.60	4.60	5.60
100 and up	65c	2.50	3.50	4.50	5.50

Strengthen that weak colony with a Booster package. Deduct the price of queen from queenless Booster packages.

All our queens in our packages, or individual queen orders, are SELECT QUALITY. The culls we DESTROY. Only queens we would use in our own apiaries do we cage for shipment. Queens' wings clipped FREE OF CHARGE on request. Safe arrival and satisfaction we guarantee on everything we ship, whether packages or queens. All orders filled PROMPTLY. We have NO DISEASE. A HEALTH CERTIFICATE and directions telling how to handle accompany all shipments.

M. C. Berry & Son

P. O. Box 684 Montgomery, Alabama

Oldest Active Package Shippers in the South

*Joe Says:

The rush is easing off but he is still busy filling your orders.

Queens will be available all summer and fall. Have you tried the 3-way Kelley Island Hybrids? They are the same price as the regular stock.

	Queens ea.	Pkgs. with qns. 2-lb.	3-lb.
1 to 25	.85	$3.00	$4.00
26 or more	.75	2.75	3.75

"They Produce"

Rossman & Long

Box 133 Moultrie, Ga.

*Joe is J. G. Rossman — Manager

Hollopeter's Queens

Reared in the North from Northern stock full of vim, vigor, and vitality. This strain of Italians has stood the test for over 40 years with beekeepers everywhere and will please you.

— Prices —

Untested Queens

1 -9	$1.00 ea.
10 -24	.90 ea.
25 -49	.80 ea.
50 -99	.75 ea.
100-up	.70 ea.

WHITE PINE BEE FARMS

Rockton, Penna.

KELLEY — "The Bee Man"

QUEENS

The package season is now over and we have a surplus of fine young Kelley Island Improved Hybrid queens, fresh daily from your Louisiana bee farm.

Each by prepaid air mail from Paducah 75c

Lots of 25 and more, 65c each.

Walter T. Kelley Co., Box 210, Paducah, Ky.

HIGH QUALITY ITALIAN QUEENS

By Air Mail ..... 75c each
10 or more ..... 70c each

For prices on Package Bees please refer to May issue of Journal.

CARLUS T. HARPER
New Brockton, Ala.

BEE LINES TO THE EDITOR

(Continued from page 324)

er than that. Talk about 'foxy grandmothers'!

"Now, just for fun and to write a headline that newspapers and magazines might pick up, why doesn't someone in the South, for a stunt, try to have four generations of queens all living? Gleanings could offer a prize I think, for the first one to tell of a great grandmother less than four months old. Would News Week and other magazines refer to it? I'll say they would. Of course, we would have to admit that the father, grandfather, and great grandfather all died early."—R.H.H.

* * * * *

"Thanks for the work you put into Gleanings. I read it from cover to cover at one sitting, re-read it at leisure and then give it to someone else to read."—L.C.R.

* * * * *

"The lesson to the story (page 108, February, 1952) is that pay loads can not be transported across state lines except in trucks having a permit from the commerce commission. And they cost like sixty. An owner can transport his product in his own truck anywhere. But when he hires it done that is a cat of another color.

"Large producers who sell to packers on a delivered basis had better look out unless they own their own trucks, and then they are not treating other producers right if they don't value their services on an equality with the rates of contract haulers. That is, they should sell high enough so the packer could not under-sell the producer who paid full freight rate.

"Missouri has about 14,000 miles of top class paved roads, all being pounded to dust by heavy contract haulers, and the little boys that don't weigh enough to even raise a dust are not allowed to run."—L.F.C.

* * * * *

"In the May issue of Gleanings I ran across some information that interests me very much. In this article it was mentioned that perhaps there were more instances of colonies of bees having two or more queens than we have realized. It also goes without saying that this is also the reason for many of the failures at introducing new queens.

"The main issue that this two-queen business brings to my mind is the big possibilities for some one to gather up a few colonies of bees in which it is definitely known that a mother and daughter queen have both been living for some time and try to breed that quality into a strain of bees. We have seen the fine results that have been obtained in breeding bees with a resistance to A.F.B. so why not breed for a tolerance of two or more queens per colony?"—J.B.H.

DADANT'S STARLINE **RICH'S LEATHER ITALIANS**

For pleasure or profit we have the two most outstanding strains available.

Only young laying queens that have produced a good compact brood pattern are caged for shipment.

These strains are under constant test in our honey production yards along with other leading breeds.

We guarantee that you will be more than pleased with their performance.

Live delivery guaranteed, clipped, and marked with a white dot for your convenience at no extra cost.

Why not requeen this summer and help prevent swarming next spring?

DADANT'S STARLINE		RICH'S LEATHER ITALIANS	
1-24	$1.15	1-24	90c
25-99	1.05	25-99	80c
100-up	1.00	100-up	75c

THE RICH HONEY FARMS JEANERETTE, LA.

Peace is for the strong . . .
Buy U. S. Defense Bonds regularly!

How is Your Label Supply?

Write for Catalog 68 styles and colors

- - - No, its not too early to take stock of your label needs. We can give you the best service now before the rush begins. Order now so you can banish label worries from your mind and have them when you need them.

The A. I. Root Co. Medina, Ohio

DADANT STARLINES QUEENS SUNKIST ITALIANS

DADANT STARLINES — the production-minded bee with disease resistance built into them. Easy to work with. They recommend themselves.
SUNKIST light-colored Italians — a favorite for years. High producers and gentle.

Starlines		2-lb. w/q	3-lb. w/q	Italians	
1 -25	$1.30	$2.60	$3.50	1 -25	75c
25-100	1.20	Pkgs. with Starline		25-50	70c
		queens, add 40c each		50-up	65c

Queens clipped, airmailed and painted on request.

SUNKIST BEE COMPANY CONVENT, LA.

1952 ITALIAN PACKAGE BEES AND QUEENS 1952

Quantity Packages	2-lb. w. q.	3-lb. w. q.	4-lb. w. q.
1-12	$3.00 ea.	$4.00 ea.	$4.80 ea.
13-99	2.90 ea.	3.75 ea.	4.60 ea.
100 or more	2.75 ea.	3.50 ea.	4.25 ea.

QUEENS: 75c each, postpaid.

Above prices are F. O. B. Hahira, Ga. Live delivery GUARANTEED. Certificates of Inspection included with all shipments. TERMS: Payment in full prior to shipping.

GOLD LEAF APIARIES BOX 252 HAHIRA, GA.

ITALIAN QUEENS
70c each
Quality Does Not Cost — It Pays
The WILBANKS Apiaries Claxton, Georgia

Package Bees for 1952

Truck loads a specialty
Nuclei made to order
Italian Queens

Eugene Walker

Live Oak, Calif.

CAUCASIANS
CARNIOLANS

Hardy, prolific, rapid build up, best of workers. Caucasians have the longest tongue of any race.

Price: Untested queens, $1.00 each, Airmail.

Build beautifully white combs. GENTLEST OF ALL RACES OF BEES. Gentleness saves time, sweat, patience, and work.

Albert G. Hann
Glen Gardner, New Jersey

STANDARD
Beekeepers Equipment
It pays to use the complete line of STANDARD equipment. Ask your dealer about this quality line today or write us for catalog and prices.
STANDARD CHURN, INC.
Wapakoneta, O.

If you are taking time to read, why not read the best? Condensed to save you time. Illustrated to give you pleasure.

Modern Beekeeping
The Picture Bee Magazine
Box 210 Paducah, Kentucky

YORK'S

QUALITY BRED YOUNG ITALIAN QUEENS

Quantity	Price
1-24	$1.00 each
25-99	.85 each
100-up	.75 each

The Strain Preferred by Leading Honey Producers

YORK BEE CO. Jesup, Georgia, U.S.A.

(The Universal Apiaries)

PACKAGE BEES — **ITALIAN QUEENS**

	1-49	50-99	100-up
2 lb. with queen	$3.50	$3.25	$3.00
3 lb. with queen	4.50	4.25	4.00
4 lb. with queen	5.50	5.25	4.90
5 lb. with queen	6.50	6.25	5.80
Queens	1.15	1.10	1.00

Safe arrival and satisfaction guaranteed.

Queens sent airmail postpaid—clipped on request.

GEO. A. HUMMER & SONS

Est. 1892

Prairie Point, Miss. Western Union, Macon, Miss.

BETTER-BRED QUEENS

THREE-BANDED ITALIANS

60c each Use them for replacing failing queens, also requeening for swarm control, etc. You can't buy any better queens at any price. **60c each**

Calvert Apiaries **Calvert, Alabama**

KNIGHT'S

THREE-BANDED LEATHER-COLORED ITALIAN QUEENS

75c each, any number — Shipped Via Air Mail

Safe Arrival — Satisfaction Guaranteed

JOHN T. KNIGHT **Hayneville, Ala.**

DADANT'S STARLINE HYBRIDS — Reg. U.S. Pat. Off.

Dadant's Starline Hybrids Produced in Little's Apiaries

	Queens	Packages 2-lb.	3-lb.	4-lb.
1-24	$1.45	$3.75	$4.50	$5.45
25-99	1.35	3.50	4.40	5.25
100-up	1.25	3.25	4.25	5.15

Extra pounds, $1.00 per lb. Shipping starts about April 10.

John Davis Italians

Queens with Davis Packages deduct $1.20 / 1.10 / 1.00 from 25c Starline prices

ABOA — American Bee Breeders Association

LITTLE'S APIARIES

Shelbyville, Tenn. P. O. Box 122

"GULF BREEZE" QUEENS

Refer to our May ads for package prices if desired. During the balance of the season, we will supply you with stock equal to any on the market regardless of price, or claims.

1-24 ..... 80c each 25 or more ..... 75c each, postpaid
Why Pay More?

Bessonet Bee Company — **Donaldsonville, La.**

Package Bees and Queens

Two High Producing Strains of Bees

	Our Old Reliable 3-Banded Italians		Dadant's Starline Hybrids		
QUEENS			PACKAGES		
	Italians	Starlines	2-lb. w/q	3-lb. w/q	4-lb. w/q
1-24	$ .95	$1.30	$3.00	$3.95	$4.85
25-99	.85	1.20	2.90	3.85	4.75
100-up	.75	1.10	2.75	3.65	4.60

Packages with Starline queens add 25c per package
(Queens Air Mail, Clipped and Painted if desired, without charges.)

Garon Bee Co. Donaldsonville, La.

Peace is for the strong . . .
Buy U. S. Defense Bonds regularly!

Index to Display Advertisers

Aeppler Co., C. W. 371, 373
American Bee Journal 372
Australasian Beekeeper 326
Barger Apiaries 378
Bayou Bee Co. 378
Beekeepers' Magazine 374
Berry & Son, M. C. 379
Bessonet Bee Co. 384
British Bee Journal 374
Bryant & Sawyer 322
Burleson & Son, T. W. 372
Calvert Apiaries 383
Canadian Bee Journal 374
Caucasian Apiaries 375
Chrysler & Son, W. A. 326
Dadant & Sons ..... Inside front cover
Daniels Apiaries 376
Delaware White Clover Apiaries 374
Dotson's Apiaries 371
Forehand & Sons, W. J. 378
Garon Bee Co. 384
Gaspard Bee Co. 377
Georgia Bee & Honey Apiaries 378
Gold Leaf Apiaries 382
Hann, Albert G. 382
Harper, Carlus T. 380
Hazel-Atlas Glass Co. ..... Inside back cover
Homan, Farris 377
Hubbard Apiaries 322
Hummer & Sons, Geo. A. 383
Hutchison Mfg. Co. 322
Jackson Apiaries 377
Jensen Apiaries 378
Jepson Co., H. H. 324
Kelley Co., Walter T. 326, 380
Knight, John T. 383
Koehnen's Apiaries 374
Leverette Apiaries, Walter D. 375
Lewis Co., G. B. 327
Little's Apiaries 383
Livermore, R. L. 374
Lotz Co., August 323
McCord Mfg. Co. 322
Marshfield Mfg. Co. 325
Merrill Bee Co. 377
Michigan Bee & Farm Supply 371
Miller & Co., Woodrow 324
Mitchell's Apiaries 375
Modern Beekeeping 382
Moore, Geo. W. 374
Moore, Sam E. 374
Muth Co., The Fred W. 322
M. Y. S. Co. 375
New Zealand Beekeeper 374
Norman Bros. Apiaries 378
Plant, W. E. 378
Rich Honey Farms 381
Root Co., The A. I. 323, 381
..... Outside back cover
Root Co. of Indianapolis, A. I. 372
Root Co. of Syracuse, A. I. 322
Rossman & Long 379
Schmidt Apiaries 372
Standard Churn Co. 324
Stoller Honey Farms 372
Stover Apiares 328
Sunkist Bee Co. 382
Superior Honey Co. 326
Walker, Eugene 382
Weaver, Howard 377
White Pine Bee Farms 379
Wilbanks Apiaries 382
Wirth, E. D. 324
Woodman Co., A. G. 324
Yates, A. W. 323
York Bee Co. 383